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ABSTRACT

This guide is designed to provide educators with ways to organize and implement strategies to ensure that deliberate efforts are made to achieve gender equity. The format allows facilitators to select specific unit content to meet both state and local staff development purposes and to adapt the suggested activities to the special professional development needs of particular audiences. Each unit follows a similar design. An organizing theme briefly describes a relevant gender equity issue. Facilitators are encouraged to expand the theme so that it treats local interests, concerns, and/or issues. Questions for discussion are included to stimulate participation and to serve, if necessary, as clarifiers. Several activities are included that can be pursued either as advance organizers or as follow-ups to augment the organizing theme. All necessary materials are included in the unit. Duplicating masters are appended. The organizing themes (and unit topics) are as follows: knowledge of gender (the concept of gender, the social meaning of gender); gender equity and the school climate (educating girls: the research); gender equity, classrooms, and learning (gender equity in the classroom, learning to learn, equity and the sciences); preparing students for an equitable future (changing work force demographics, counseling for the 21st century careers, gender equity for school improvement); and institutionalizing gender equity (surveying the institutional status of gender equity). (YLB)

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PROGRAMMING FOR GENDER EQUITY

ED 385 707

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A GUIDE FOR STAFF DEVELOPM

By Dr. Bette J. Soldwedel

FLORIDA DEPARTMENT OF EDUCATION
Frank T. Brogan
Commissioner of Education

Dear Educators:

It is important to encourage gender equity in Florida's public school system. For that reason, I appreciate having the benefit of the extensive information on the subject found in this document. "Programming for Gender Equity" would serve as a helpful resource in staff development.

I look forward to working with each of you in districts throughout the state in the coming months to ensure quality education for all of Florida's students.

Sincerely,

Frank T. Brogan

Frank T. Brogan
Commissioner

FTB/na

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An affirmative action/equal opportunity employer

PROGRAMMING GENDER EQUITY

A GUIDE FOR STAFF DEVELOPMENT

by

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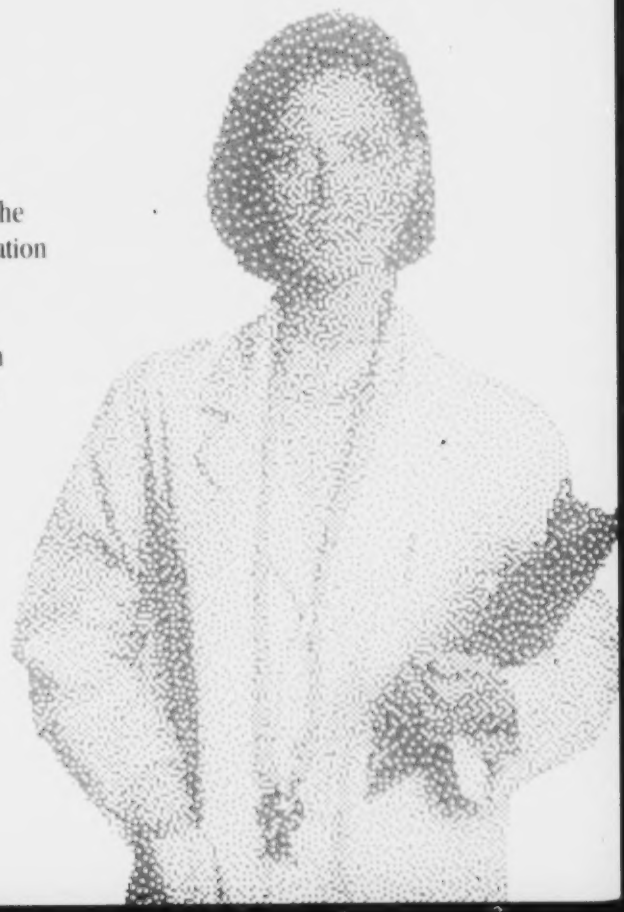

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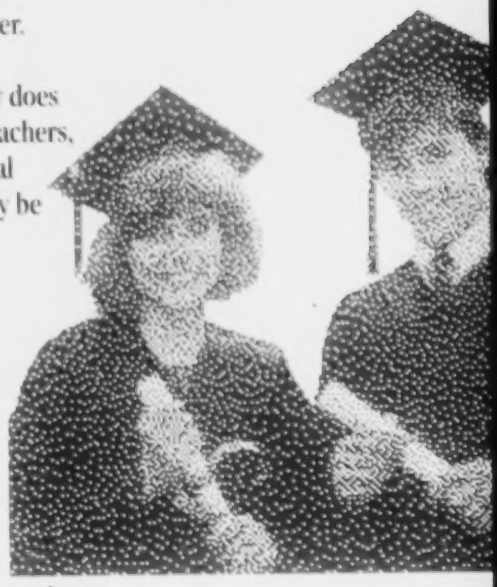
FLORIDA VISION for GENDER EQUITY PROGRAMMING

Gender equity in Florida's schools means that all students, women and men, girls and boys, have every opportunity to advance themselves unencumbered by bias in their studies and in their preparation for careers. Informed and sensitive teachers, counselors and administrators create the school climate that allows every student the freedom to learn in a setting free from bias based on gender.



Why is gender equity an issue today? It is an issue because gender equity does not fully exist in schools or in our society today. It is a particular issue for teachers, counselors and administrators because schools teach basic values and social responsibility that children carry into adulthood. WHY should gender equity be a primary concern for staff development?

- It is RIGHT morally and ethically.
- It is the LAW.
- It strengthens FAMILIES by the sharing of responsibility for financial solvency.
- It strengthens our BUSINESSES by increasing productivity as well-prepared WOMEN and MEN utilize their talents to the fullest.
- It strengthens our SOCIETY by increasing the value, respect and dignity of ALL of its members.
- It strengthens our SCHOOLS by returning them to their original purpose: to prepare ALL children to make their best possible contribution to the United States of America.

The mission of gender equity in the schools of the State of Florida is to ensure equality of opportunity for ALL students to achieve economic self-sufficiency through career preparation. The goals designed to make that mission a reality are as follows:

- To infuse gender equity throughout the educational environment.
- To promote the implementation of policies, programs and services that meet the unique educational needs of women and girls.
- To assure, through Applied Technology and Adult Education programs, that vigorous efforts are made to serve single parents, displaced homemakers,

single pregnant women as well as students seeking to enter occupations that are nontraditional for their gender.

LEGISLATIVE SUPPORT

Legislation that supports gender equity initiatives includes the following:

- **Improving America's Schools Act of 1994**
  Reauthorization of the Elementary and Secondary Education Act.

  This Act has several provisions that bear on gender equity. Among them:

  > Student assessment results need to be "desegregated within states, districts, and schools in gender, race, limited English-speaking status, migrant status, disability and economic status..."
  >
  > "The State review of district improvement plans must insure that professional development meets such conditions as reflecting research and teaching; contributing to continuous improvement in the classrooms or school; and including gender-equitable methods, techniques and practices."
  >
  > Part B of Title V, "Promoting Equity," authorizes funds for grants... to develop and implement model gender equity programs. It also authorizes technical assistance to states and school districts to conduct research on the subject of women's educational equity.

- **TITLE IX of the Education Amendments of 1972**

  In 1972 Congress passed Title IX of the Educational Amendments. It was designed to eliminate discrimination on the basis of sex in any education program or activity receiving federal financial assistance. With certain exceptions, the regulations bar sex discrimination in any academic, extracurricular, research, vocational or other educational program, preschool through post-graduate.

  Title IX covers admissions, treatment of students, financial aid, counseling, health care and insurance benefits, marital and parental status of students, student employment, course content, sexual harassment, and single-sex courses.

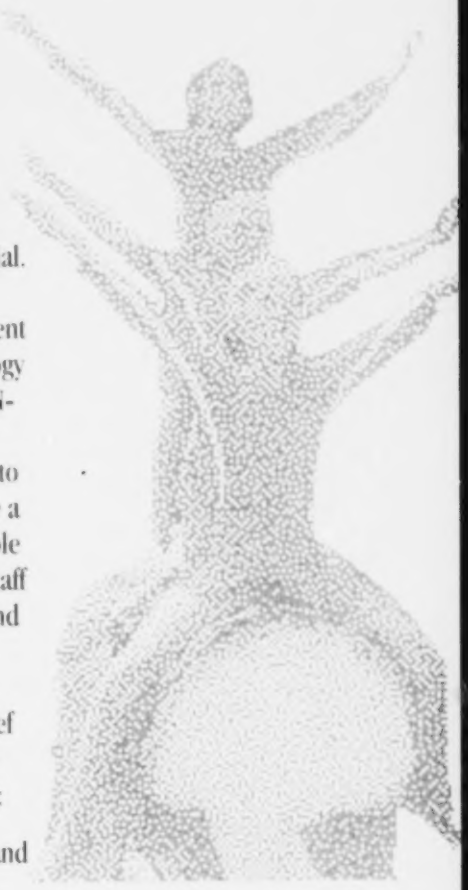
- **Carl D. Perkins Vocational & Applied Technology Education Act of 1990**

  One of the many provisions of the Perkins Act is a comprehensive effort to infuse gender equity into vocational education programs. The Act requires states to develop programs with positive action to assist with the elimination of sex bias, sex stereotyping and sex discrimination. (The legislation uses the term "sex" instead of "gender.")

- **Florida Educational Equity Act**

  This Act forbids discrimination on the basis of race, national origin, sex, handicap and marital status against students AND employees in the Florida system of public education. It covers criteria for admission to programs, courses or classes, guidance and counseling services, financial assistance services, participation in all school activities, physical education and athletic operations.

STAFF DEVELOPMENT



The people who are fundamental to the realization of Florida's gender equity goals are the teachers, counselors, and administrators. Their understanding of gender equity issues and their readiness to ensure equitable education are essential.

To demonstrate its deep commitment to gender equity, the Florida Department of Education, through the Office for Gender Equity, Division of Applied Technology and Adult Education, authorized the preparation of **PROGRAMMING FOR GENDER EQUITY**. The intention is to promote gender equity AS A CONCEPT THAT PERMEATES ENTIRE EDUCATIONAL COMMUNITIES. ALL students have a RIGHT to fair, equitable opportunity and treatment in schools. ALL school personnel have a RESPONSIBILITY to ensure that RIGHT. Recent studies have identified inequitable treatment of female students as a particular issue. Thus, a major focus of this staff development guide is on gender equity as a key issue in the education of girls and women.

The staff development curriculum presented here has evolved from the belief that a tested document would enhance gender equity in Florida's schools to the extent that teachers, counselors and administrators are able to do the following:

- critically examine issues relevant to the educational progress of students and their professional roles in ameliorating/treating/confronting those issues;
- increase their knowledge of and sensitivity to gender bias and gender role stereotyping issues that affect the educational progress of students, particularly girls and women;
- become familiar with strategies to reduce bias and stereotyping in their classrooms, administrative and/or counseling and guidance practices.

The State's strategic program objectives are to reinforce BELIEFS among all school personnel including the following:

- the RIGHT of all human beings to fair, unbiased treatment in every aspect of their educational experience;
- the ABILITY of the girls and women to perform successfully in a wide variety of academic and career development programs including those geared to instruction in mathematics, science and technology and/or to training for careers that are nontraditional for their gender;

- the RIGHT of girls and women to gain access to any course, program of study or other educational opportunity which matches THEIR interests, abilities and/or future goals and is consistent with IMPROVEMENT of their preparation for life and career roles;
- the ESSENTIALITY of the roles of all school personnel in infusing the concept of gender equity in Florida's schools and colleges.

CONTENT AND FORMAT OF THE GUIDE

The content of **PROGRAMMING FOR GENDER EQUITY** has been developed to provide educators with ways to organize and implement strategies to ensure that deliberate efforts are made to achieve gender equity. Teachers, counselors and administrators need to know WHY gender equity is a concern for all educators and WHAT they can do to ensure gender equity in all aspects of schooling.

The format allows facilitators to select specific unit content to meet both state and local staff development purposes and to adapt the suggested activities to the special professional development needs of particular audiences.

Each unit follows a similar design. An ORGANIZING THEME is introduced which briefly describes a relevant gender equity issue. Facilitators are encouraged to expand the theme so that it treats local interests, concerns and/or issues. QUESTIONS FOR DISCUSSION are included to stimulate participation and to serve, if necessary, as clarifiers. Several ACTIVITIES are included that can be pursued either as advance organizers or as follow-ups to augment the organizing theme.

The ORGANIZING THEMES and UNIT TOPICS are as follows:

KNOWLEDGE OF GENDER

I. The Concept of Gender
II. The Social Meaning of Gender

GENDER EQUITY AND THE SCHOOL CLIMATE

III. Educating Girls: The Research

GENDER EQUITY, CLASSROOMS AND LEARNING

IV. Gender Equity in the Classroom
V. Learning to Learn
VI. Equity and the Sciences

PREPARING STUDENTS FOR AN EQUITABLE FUTURE

VII. Changing Workforce Demographics
VIII. Counseling for 21st Century Careers
IX. Gender Equity for School Improvement

INSTITUTIONALIZING GENDER EQUITY

X. Surveying the Institutional Status of Gender Equity

THE CONCEPT of GENDER

for Notes

Activity 10 minutes

Review the handout "Checking Your Stereotypes" *(pg. 8)*. Check quickly the stereotypes according to the instructions provided on the handout. Set aside for use later.

DEFINING GENDER* 15 minutes

Too often the terms "sex" and "gender" are used interchangeably in our society, often delimiting serious consideration of equity issues.

It is important to understand that the term "sex" refers to physical differences between men and women while the term "gender" is used to refer to behavioral differences.

Sex = ***Biologically determined physical differences between males and females.***

Gender = ***Socially/culturally generated attitudes and behaviors assigned to persons and referred to as masculine or feminine.***

In this country we have a variety of cultural stereotypes about masculine and feminine behaviors. Margaret Eisenhart, Professor of Educational Anthropology and Research Methodology, University of Colorado, Boulder, comments on this point (1994):

> *I use the term "culturally female" to refer to behaviors that are commonly and often implicitly identified with girls or women such as having primary responsibility for child-rearing... [Culturally male behaviors] include being a breadwinner or being a scientist.*
>
> *In the United States, our history and social legacy have created a cultural system in which the qualities and responsibilities*

* Organizing theme concepts adapted from lectures on Gender and Society by Professor Christine E. Rasche, College of Arts and Sciences, University of North Florida. With permission of Dr. Rasche.

for Notes

identified with males are more highly valued than those identified with females. (See also C. Littleton, 1987 ***"Reconstructing Sexual Equality," CALIFORNIA LAW REVIEW****, 25, 1279-1337.)*

From this perspective, biological sex and cultural gender are distinct. Biological males may exhibit culturally female behaviors, and biological females may exhibit culturally male behaviors...

While the attributes which make up our ideas of masculinity and femininity are very closely tied to one sex or the other, most gender attributes are not exclusively either masculine or feminine. In fact, cross-cultural and anthropological studies of different people around the world have demonstrated repeatedly that gender characteristics can vary dramatically from culture to culture.

This finding of wide cultural diversity regarding gender leads to the conclusion that **while a person's sex is hereditary and biological, a person's gender, social roles and attitudes are learned**. In other words, whether a person becomes strong or weak, independent or clinging, gentle or brutish, nurturing or self-centered, interested in math or afraid of it...all of these depend largely on what a person LEARNS as he or she grows up. In a society where little boys are encouraged by adults to behave in ways which are thought of as "masculine" and little girls are encouraged to behave in ways thought to be "feminine," is it any wonder that gender stereotyping becomes ingrained in the psyche? Is it any wonder that the need for gender equity is a critical concern for both girls and boys, men and women?

DISCUSSION QUESTIONS 10 minutes

The following questions can be used to elaborate on the theme that gender is learned.

- Can you recall moments in your youth when you were not allowed to participate in an activity or to enroll in a course because of your gender? How did those events make you feel? As you think about it, to what extent have such events shaped your gender role as it has evolved?
- As you think about your own behaviors or attitudes, can you identify both masculine and feminine characteristics? How does this bit of introspection make you feel?
- Look at the words you checked as "Describe Me" on the handout. What would you say about your self image in relation to male and female traits you marked? About those most valued by society?

Activity 60 minutes

Refer to "Checking Your Stereotypes."

1. Form small groups to reach consensus on the ten most masculine traits; the ten most feminine traits; the ten traits most valued by society.
2. Using the lists from small groups, develop a total group consensus. For each gender, how many are positive traits? Negative?
3. Discuss the question "Must a male or female display all of the ten ascribed characteristics to be considered either masculine or feminine?"

for Notes

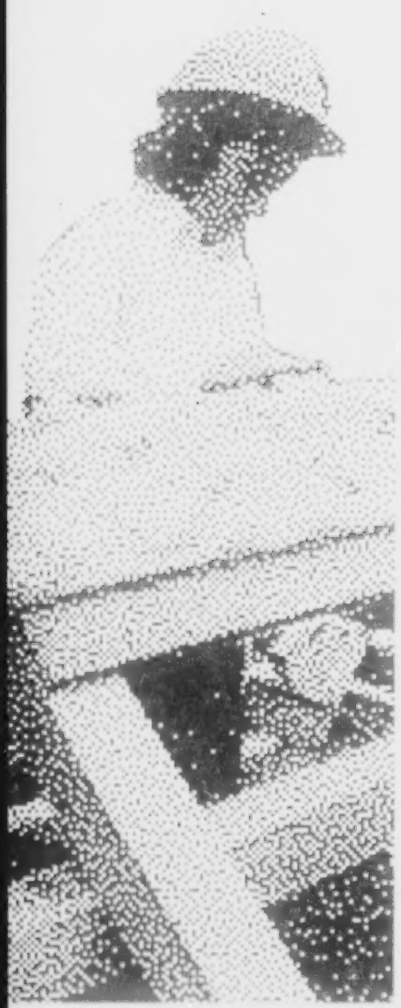
REFERENCE

Eisenhart, Margaret. "Gender Equity in Scientific Work: What Does It Mean? What Might It Be?" Paper presented at the Women's College Coalition Conference on Studies in Success, Mount Holyoke College, November, 1994.

Checking Your Stereotypes

Instructions: Check those traits which apply in each column.

Character Trait	Male	Female	Describe Me	Are Most Valued by Society
peaceful				
driven				
mathematical				
passive				
aggressive				
emotional				
logical				
objective				
dominant				
independent				
cooperative				
competitive				
quiet				
active				
verbal				
leader				
listener				
talker				
self-confident				
adventuresome				
expressive				
controlled				
indecisive				
artistic				
athletic				
neat				
spiritual				
practical				
gentle				
rough				
caring				
egocentric				



THE SOCIAL MEANING of GENDER

for Notes

Activity 10 minutes

Take a few minutes to think about a time when you were the subject of stereotyping. Make a few notes. Did you recall a positive or negative situation? How do you feel about that incident? How did you feel at the time? Why do you think this particular incident is the one that came to mind as an example of stereotyping?

THE SOCIAL MEANING OF GENDER* 20 minutes

Linda Carli (1994) tells us that "gender is more than just an attribute of individuals. It is a set of social processes by which women and men, because they are treated differently, come to see themselves as different and to behave correspondingly. In gendered interactions, belief in differences becomes a self-fulfilling prophecy — *one that disadvantages women*."

Most people in the United States think of gender as being directly related to a person's sex. Males are expected to behave in masculine ways. Men or boys who display what are thought of as feminine behaviors or characteristics are ridiculed. Similarly, women or girls who display what are thought of as masculine behaviors or characteristics also are berated. We learn about appropriate gender roles early in life. So pervasively and so consistently are these stereotypes reinforced, we tend to grow up taking them for granted. This means that gender has a very powerful SOCIAL MEANING.

We use gender all of the time to make judgments about others and, for that matter, about ourselves. Those judgments very often influence the way we act. Gender serves as the basis for judgments in three ways. As we discuss the following factors, think how they apply specifically to the way boys and girls are treated by adults and the way they treat each other in classrooms and other school activities.

1. **Gender is used as a primary predictor of behavior.** This means that we make judgments in advance (partly on the basis of gender) about how we think young people, for example, will act. We expect certain behaviors

* Adapted from lectures on Gender and Society by Professor Christine E. Rasche, College of Arts and Sciences, University of North Florida. With permission of Dr. Rasche.

for Notes

of boys and other behaviors of girls, even if we are meeting the children for the first time.

2. **Gender is used as an assessment tool of behavior.** This means, for example, that we use gender to make judgments after the fact to determine whether a young person in school has behaved well or not during a social interaction. Having already made a mental "prediction" about the behavior which is expected, we then go on to make judgments about how well the person lived up to our predictions. If a male fails to act in the masculine ways expected, we might come away from the interaction thinking that he is a "wimp." The very same behavior may have been acceptable if the person had been a female. A female who fails to live up to feminine gender expectations may be thought of as "pushy," even though the very same behavior in a male may be been viewed as "assertive." When young people violate our gender expectations in important ways they may be perceived as having negative qualities. The same qualities might be viewed favorably in those of the opposite sex.

3. **Gender expectations become a "filter" through which we screen our perceptions of the world.** This means that our learned gender ideas are so basic and fundamental and internalized, they often act like "filters" over our view of the world. They filter the way we "see" ourselves and others as persons. They filter the way we "see" ourselves in the world of work. They even filter the way we "see" ourselves in household roles. We may not be able to "see" that men can nurture little children or that women can be world leaders if our "gender filters" are firmly in place. The fact that men in our own society are serving as very capable child care givers (as single fathers, or daycare workers, or pediatricians) may be overlooked in our everyday assignments of gender expectations. The fact that women can serve as very capable world leaders (Dr. Madelaine Albright, our representative to the United Nations, is a current example) may be forgotten most of the time.

Our gender filters become so clogged, we sometimes cannot "see" that things have changed considerably since our ideas were formed. Thus, for example, many American men and women still cling to the belief that "a woman's place is in the home" despite the facts that women now make up over 40 percent of the workforce, that many women are single heads of their own households, and that most dual income families could not make it financially without both checks. The times have changed, but traditional expectations still "cloud" our perceptions.

In summary, gender has tremendous social meaning in our lives. We use gender as a basic tool for predicting the behavior of others, for judging their actual behavior, and for generally viewing the world. We do all this without thinking about it most of the time.

DISCUSSION QUESTIONS 20-30 minutes

The following questions can be used to clarify or to expand on the workshop theme and to relate it to gender equity issues in education.

- As you think about your school setting, can you identify typical behaviors that YOU expect of males? Of females? Do you expect boys and girls, young men and young women to exhibit the same or different behaviors? What makes the difference? Can you give an example of an occasion when you were surprised by students' behaviors that you did not expect? What did you learn, if anything, from that experience?
- Some literature suggests that women and girls tend to be self-effacing to their detriment in classroom situations. Does your experience confirm that observation? What are two or three ways to combat the tendency to use gender as a predictor of behavior?
- How does the concept of "self-fulfilling prophecy" relate to the theme "The Social Meaning of Gender"? How would you define "self-fulfilling prophecy" as it applies to gender and gender equity in schools? As you think about your own development, how did a self-fulfilling prophecy impact your life? Was it helpful, harmful or both?

Activity 15-30 minutes

Partners or small groups can be organized for this activity. Invite participants to share experiences, on a voluntary basis, that they recorded in notes at the beginning of the workshop. How many recalled experiences where other people made judgments about them based on gender bias? Volunteers may want to share their experiences and their feelings. What incidents in their current school situation illustrate how the use of gender filters have resulted in stereotyping of students? In general is such stereotyping helpful or harmful? What are some generalizations that can be made about using gender filters to make judgments about other people?

Activity 30 minutes

Read Judy Mann's article "New World Daughters" *(pg. 12)* and discuss her theme "How Parents Raise Boys and Girls Differently and Why It's Wrong." What are the reactions to Mann's suggestions to promote mutual respect between boys and girls? In what ways does Mann challenge the gender filters of parents? What are ways Mann's article could be brought to the attention of parents?

for Notes

REFERENCES

Carli, Linda. "Self-Evaluation in the Presence of Another: Does Gender Make a Difference?" Paper presented at the Women's College Coalition Conference on Studies in Success, Mount Holyoke College, November, 1994.

Mann, Judy. "New World Daughters," THE WASHINGTON POST, January, 1995.

NEW WORLD DAUGHTERS*

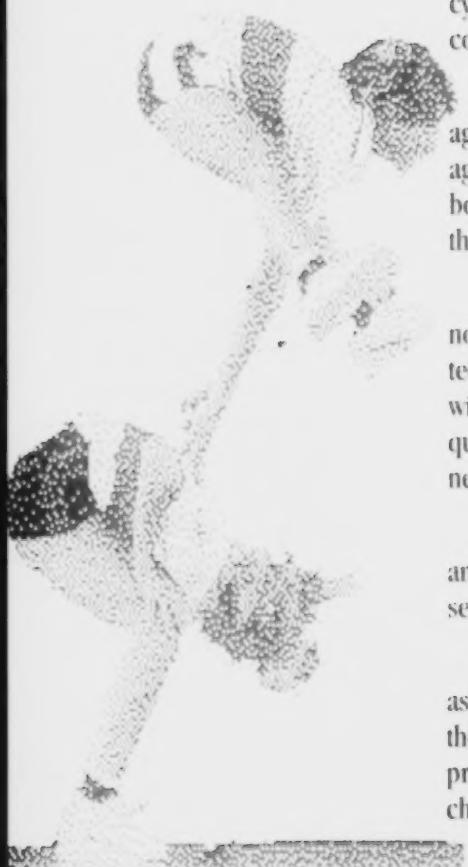
How Parents Raise Boys and Girls Differently and Why It's Wrong

By Judy Mann

When my daughter was 11, I realized that as much as I'd written about what happens to girls in schools, in their homes, and in the culture at large, I had no idea what I could do to help my own daughter. I have spent the last four years researching what happen to girls, and I have come to a number of conclusions that bear directly on today's welfare reform debate.

Perhaps most critically, I concluded that we will never change the outcome for girls until we change the way we raise boys. We need to break the false sense of entitlement — *at the expense of girls* — that boys have, and we need to break the equally destructive cycle in which we raise girls to be "nice," submissive and deferential.

This cycle of entitlement and submission plays a powerful role in a range of problems plaguing American society, including teenage violence, teenage pregnancy, wife battering and the costly sexual harassment suits that haunt the business community.



The irony for conservatives who have fought a rear-guard action for 20 years against women's rights is that the surest way out of the welfare state they rail against is to raise girls with the same range of opportunities and possibilities that boys have. This is the best inoculator against teenage pregnancy that we know of, the best vaccine against welfare dependency we have.

Though the hand-wringers would have you believe otherwise, teenagers are not all sex-crazed. In fact, it's more likely that the culture is sex-crazed and teenagers are trying to resist it. Almost universally, they tell researchers that they wish they had waited until they were older to have sex. In one study, nearly a quarter of the teenagers — boys as well as girls — said they believed in abstinence before marriage.

But the emphasis we place on feelings in girls, on their interpersonal skills and on their ability to care for others is precisely what sets them up to succumb to sexual overtures by boys. They usually regret it later.

Proof of this is found in a study by Marion Howard and Judith McCabe, who asked more than 1,000 sexually active girls 16 years of age or younger what topic they most wanted to have more information about. Abortion? Masturbation? AIDS prevention? None of the above. Instead, a whopping 84 percent of the girls checked this item: "How to say no without hurting the other person's feelings."

Parents can help their daughters through the messages they give about what they value in their families. If we stress the importance of boys and being popular, that tells our daughters that we value the social agenda. If we praise our daughters' school efforts, instead, that helps establish a different priority.

Parents can also help their daughters by coaching them to set boundaries. This means giving girls the sense that they are entitled to question boys' behavior and to say things such as, "Why do you think it's all right to do that?" Or, "How do you think that makes me feel when you do (say) that?" Or, "No, stop, it's not all right."

The goal is nothing short of changing the image in boys' minds of what is appropriate behavior toward girls and women and to make them more reflective about their own sexual desires. This is where mothers, who can remember very well what it is like to be a teenage girl, can make an important contribution by talking to their sons about the need to respect girls and women. Mothers need to tell their sons what it feels like to have to cope with the double standard in which boys who are sexually active are looked up to for being studs and girls are looked down on for being sluts.

There are some other things we can do to promote mutual respect between boys and girls and to encourage self-reliance in girls:

- *Have boys do things for girls, such as getting them a drink or fetching a book.* The point is to have girls feel entitled to ask boys to do things for them and to develop in boys the capacity to do things for girls, as opposed to expecting girls to wait on them.
- *Encourage boys to be emotional and to be socially and interpersonally sensitive and responsive to others.* Men who cannot express their emotions can turn to violence.
- *Encourage boys and girls to be friends and to do things together, but keep a wary eye out for tendencies by both to fall back on stereotypical patterns of girls doing things for boys, such as cleaning up.*
- *Don't let boys get away with interrupting girls.* Encourage girls to talk and boys to listen. Tell girls to speak out if they feel no one is listening.
- *Don't cosset daughters.* Encourage them to be rough and ready and independent. Don't be too ready to help them. Encourage daughters to take risks, and let them learn to fail.
- *Praise girls for their talents and abilities, not just their hard work.* Instead of telling a girl, "You worked hard," tell her, "Gee, honey, you were great!" Learn to visualize her as a scientist, a college professor, a community leader.
- *Expect girls to do as well in math and science as boys, and encourage them to take the highest, hardest levels of math and science.* Stress to them the usefulness of these courses in gaining access to high-paying careers.
- *Encourage girls to form study groups with their pals and to take the challenging math and science courses with friends.* Daughters who are crossing gender lines into "male" territory in school need support just as we mothers did when we crossed gender lines in the workplace.
- *Encourage your schools to treat boys' and girls' athletic endeavors equally, by deglamorizing the macho sports and elevating the status of female athletes and girls' teams.*

- *Teach sons that promiscuity is equally debasing for boys and girls.* Don't wink or smirk at media reports of promiscuous sexual activity, whether it is high school athletes or adult celebrities.

The pattern in America has always been that boys' lives expand, while girls' lives are constrained. To break this pattern, girls should be given more freedom and opportunities in everything from athletic endeavors to schoolwork and to out-of-school activities such as summer camps that specialize in sports and computers. Encourage girls to take internships in nontraditional fields.

Girls who are self-centered rather than man-centered, who are valued for what they can do rather than how they look, who have a vision of a self-reliant and independent future rather than a life of domestic or welfare dependency will have the confidence to make choices that will promote their own success. If the choice comes down to hurting themselves or hurting someone else's feelings, girls who have practiced these skills and who have a clear eye about what is at stake will place their own welfare first. They will feel entitled to do that.

Welfare reform has to be viewed as a two-step process: what we should be doing with people who are on welfare now, and how to keep a new generation of teenage mothers and their babies from going on the rolls. No matter what Congress and the Clinton administration do to address the first stage, we will never succeed in creating long-term, systemic welfare reform until we raise girls to believe that their ticket to happiness, security and success is to be found in themselves, and not someone else. They need to understand that the main task of adolescence is to become the most competent and accomplished person they can be, with a full range of possibilities open to them of what life has to offer.

Self-reliance is not a conservative or liberal value: It is one of the most cherished values in American culture. We need to nurture that quality in our daughters, just as we do in our sons.

Judy Mann *is a Washington Post columnist and author of* THE DIFFERENCE: GROWING UP FEMALE IN AMERICA (WARNER BOOKS).

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EDUCATING GIRLS: THE RESEARCH

Activity — 20 minutes

Think about the climate in your school. Is it welcoming to all students? Would you say that it is hostile in some ways? In what ways could the climate be improved? What can male and female educators do, what actions can they take, to ensure a positive, inviting, equitable environment in your school?

HOW SOCIETY AND EDUCATION SHORTCHANGE GIRLS — 30 minutes

In recent years, and particularly since the publication of THE AAUW REPORT: HOW SCHOOLS SHORTCHANGE GIRLS sponsored by the American Association of University Women (1992), an action agenda to correct deficits in the education of girls and women has been unfolding. The "AAUW Report," an analysis of studies completed by the Center for Research on Women at Wellesley College, strongly challenged the common assumption that girls and boys receive equal education in the schools of America.

That study, along with the research of Carol Gilligan (1982), Brown and Gilligan (1992), Myra Sadker and David Sadker (1986, 1994), and Peggy Orenstein (1994), tells us that schools and society not only treat girls and boys differentially but that the effects are harmful on girls' personal, psychological and career development. The evidence is overwhelming.

RESEARCH FINDINGS

The findings given in the following section are quoted directly from The Readers' Companion to SCHOOL GIRLS by Peggy Orenstein, with permission from Doubleday and the American Association of University Women. The research documentation for the findings is given in Peggy Orenstein's book SCHOOL GIRLS which is a recommended resource on gender equity. Additional sources of current research are given in **References** at the end of the unit.

for Notes

CONFIDENCE AND THE CLASSROOM*

- When boys yell out unsolicited answers in class, they receive attention and instruction; when girls do the same, they are ignored or reprimanded.
- Teachers call on girls less frequently than boys; they tend to solve problems for girls but encourage boys to muddle through on their own; they often evaluate boys' work on academic merits and girls' work on neatness. High-achieving girls who combine tractability with superior performance receive the least amount of attention from their teachers. Additionally, gifted girls are more likely than gifted boys to be shunned by their peers.
- Girls see themselves as less able than boys to complete difficult tasks; they give up on problems more easily; they internalize their failures more readily than boys; they discount success as "luck." Only 15% of girls will argue with their teachers when they think they are right as compared to more than one-third of the boys.
- Girls who repeat a grade are more likely than boys to internalize the failure, regarding it as a message about their competence. Over four times as many girls as boys who leave school related their decision to having been held back a grade.
- For both boys and girls, confidence in math and science skills is tied to over-all self-esteem and ambition in career plans. Girls who like math are more likely to aspire to careers as professionals; only women who have taken more than two math courses in college subsequently receive salaries equal to or greater than those of their male counterparts. BUT

  The percentage of girls who say they like math drops 20% between elementary school and high school; the percentage of boys who say they like math drops only 12%.

  Girls are less likely to feel confident in math skills than boys (even when they perform as well), and are less likely than boys — with poorer grades — to believe they can pursue a math-related career. A decline in confidence precedes a decline in ability.
- Physically active girls have higher self-esteem than their nonactive counterparts. Yet when sports activities are coed, girls' confidence in their athletic abilities plummets.
- Eighty-five percent of girls say they are sexually harassed at school; one-

SOURCE

THE READERS' COMPANION TO **SCHOOL GIRLS** BY PEGGY ORENSTEIN, "Observations from SCHOOL GIRLS Showing How Society and Our Education System Shortchange American Girls" (1994). New York: Doubleday.

*Material has been compiled from the American Association of University Women report SHORTCHANGING GIRLS, SHORTCHANGING AMERICA, as well as from other studies on gender equity in education and adolescent self-concepts.

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third of girls who have been harassed report not wanting to go to school because of the harassment; one-third of harassed girls say they do not want to speak up in class because of harassment. More than half of the students who have been harassed say the incidents occurred during class.

SELF-IMAGE, ETHNICITY, SEXUALITY*

- By high school, nearly half of boys say they are "happy the way I am" as opposed to less than a third of the girls. Boys are also far more likely than girls to reject negative characterizations such as "I wish I were somebody else" and "Sometimes I don't like myself."
- Between the ages of nine and fifteen, the number of Latina girls who are "happy the way I am" drops by 38% compared with a 23% drop for white girls and a 7% drop for black girls. Approximately half never graduate from high school. Latina girls maintain a more negative body image, experience higher levels of anxiety and depression, and are at greater risk of attempting suicide than any other group of children.
- Despite their higher self-esteem, black girls lack academic self-confidence, have a lower opinion of their teachers and schoolwork than girls of any other group, and gradually become angrier and more alienated by the academic system. Black girls interact with teachers less than white girls, but attempt to initiate interactions more than white girls or boys of either race. They receive the least reinforcement for their performance. Between elementary school and high school, grades for schoolwork plummet 43 percentage points.
- Almost twice as many boys as girls say their talents are what they like most about themselves; girls tend to choose an aspect of their appearance. Appearance is the single most important determinant of self-esteem for white middle school girls.
- Two-thirds of girls have a negative body image. Girls with a negative body image are more likely to suffer from depression and to develop eating disorders. Teenage girls are twice as likely as boys to say they feel sad and hopeless and are four to five times more likely to attempt suicide.
- The number of girls under the age of twelve seeking help for severe eating disorders doubled in the late 1980s. Up to 40% of nine-year-olds today are dieting.
- Up to 55% of middle and junior high school students have had sexual intercourse. Girls who have sex as young teenagers regret their decision at twice the rate of boys. Young sexually active girls have lower self-esteem than their non-active counterparts, but boys show no difference.

SOURCE

THE READERS' COMPANION TO **SCHOOL GIRLS** by Peggy Orenstein (1994) Doubleday. Reprinted with permission of Doubleday and the American Association of University Women.

for Notes

for Notes

DISCUSSION QUESTIONS 30-50 minutes

- What particular findings do you think apply to your school? To your classroom? To your students? Are there generalizations in the narrati[illegible]at you want to explore further? That you concur or disagree with?

- How many things can you think of that happen in your school (or in your classrooms) that demean girls? Are most of these things unintentional? What can you do to stop these demeaning things? How do these questions apply to boys?

- As you think about your own background in school, what forms of gender inequality were present? What helped or hindered the resolutions of these inequities?

- If you are a female, can you think of times when you were young that an adult (teacher or parent) publicly compared you favorably with a male? Do you recall your feelings? If you are a male, can you recall experiences when you were compared favorably with a female? How did that make you feel?

- Is it more difficult for girls today to succeed in school than it was when you were in school?

- Can you think of persons who influenced you the most? What were they like? Was stereotyping ever an issue or factor in your relationships with others? Is it an issue for you today?

- As you think about your own adolescence or young adulthood, how did you feel about yourself? What made you proudest about yourself? What caused you the most embarrassment? Did you ever consider dropping out of school? What prevented you from doing so?

- What are some strategies that we can use to squelch stereotyping and to promote gender equity in our schools? In our classrooms? (List by categories: administrators, teachers, counselors.)

Activity 30 minutes

Gaye Luna, in the article "Overcoming Subtle Messages of Sex Inequity," *(pg. 19)* addresses many of the problems discussed in this workshop. Examine the article and consider ways educators can successfully treat similar problems.

OVERCOMING SUBTLE MESSAGES OF SEX INEQUITY*

By Gaye Luna

As educators, we all have the responsibility to treat students — *male and female* — equitably. But recent reports indicate that female students are getting shortchanged by teachers.

It's not just blatantly biased remarks that can offend. Often, behavior we may consider insignificant can cause harm to female students.

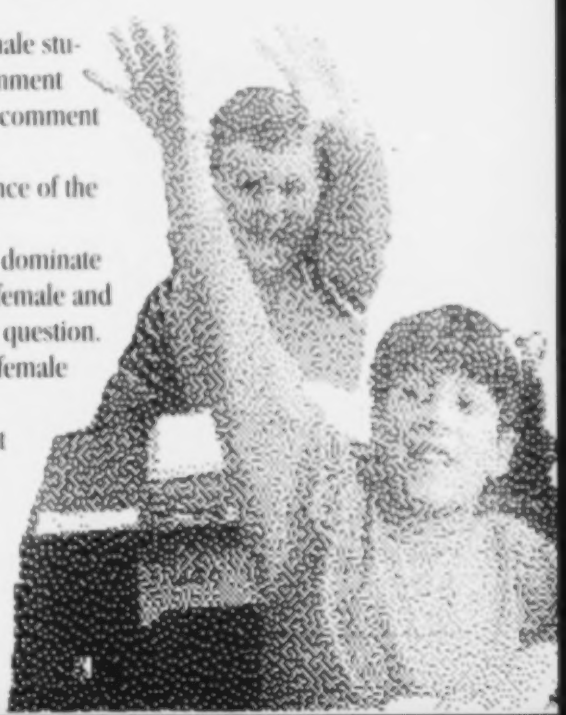
These "micro-inequities," which can be anything that causes an individual to be singled out, overlooked, ignored, or otherwise discounted on the basis of unchangeable characteristics such as sex, race, or age, are well documented in research on equity issues.

Problem: 'Invisible' girls

- Encourage girls to ask questions, ask complex and abstract questions of female students, and ask the same kinds of questions to students of both sexes.
- Distribute attention and praise equally among students.
- Encourage female students to explore and experiment and offer instruction on how to do things for themselves; don't do the task for female students or allow them to fail with less instruction.
- Offer opportunities to assist in class on an equal basis, such as taking roll, delivering notes to school offices, collecting papers.
- Do not allow female students to be physically "squeezed out" from viewing a laboratory assignment or a demonstration.

Problem: Different treatment

- Use eye contact to recognize female students who speak up in class; also nod, gesture and use their names.
- Try not to interrupt female students any more than you would male students and do not allow other students to do so.
- Encourage students to respond to comments and questions. If male students focus on each other's points but ignore an appropriate comment offered by a female student, slow the discussion and draw in the comment that has been overlooked.
- Direct disagreement of female students' statements to the substance of the remarks and not their sexuality or perceived social role.
- Do not allow male students to talk more than female students or dominate discussions (encourage taking turns at speaking) and give both female and male students an equal amount of time to respond after asking a question.
- Do not use patronizing, stereotypical language when addressing female students, such as "sweetie" or "little girls."
- Avoid grouping students according to sex, especially in a way that implies female students are not as competent or do not have status equal to male students.

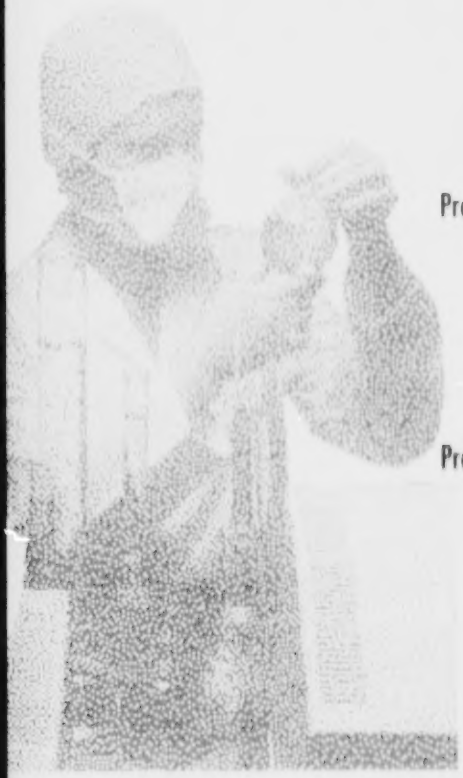


Problem: Fear of math/science

- Encourage female students to enroll in subjects that strengthen their math and science backgrounds, such as technical courses, industrial programs and technology classes. Encourage self-confidence and self-worth in such subjects.
- Share information that demonstrates the importance of math and science in many careers.
- Encourage female students' intellectual ability.
- Avoid disparaging comments that address female students' seriousness and academic commitment such as, "Are you really serious about learning this math theorem?"
- Encourage female students to discover alternative solutions to problems and to be intellectual risk takers.
- Have the same academic standards for all students.

Problem: Perception of goals

- Do not generalize that future marital and parental status will direct or automatically interfere with the career or professional plans of female students.
- Ask female students about their college plans and encourage them to investigate all avenues for future success as college students. Provide career information and other resources.
- Help female students learn about traditionally male fields such as the sciences, law, medicine and technical areas, particularly when these areas reflect a student's interests and abilities.
- Consider being a mentor for female students or help students find role models or mentors in career fields that interest them.



Problem: Biased materials

- Be aware of these types of biased messages: invisibility (underrepresentation), stereotyping, imbalance/selectivity (one-dimensional rather than varied perspectives on issues and events), a glossed-over discussion of controversial issues, separation of issues related to gender and race, and an overuse of masculine terms.

Problem: Communication patterns

- Use the same tone in talking with all students; avoid using a patronizing or impatient tone with female students.
- Avoid using generically masculine language that implicitly excludes women such as the pronoun "he." Try to adopt a nonsexist language policy.
- Do not use classroom examples that reflect stereotypical ideas about female and male social and professional roles, such as "he, the doctor" or "she, the maid."
- Do not allow sexually obscene language, sexually explicit jokes and sexually suggestive comments in your classroom.

Gaye Luna *is professor and chair of the Department of Technology at Northern Arizona University in Flagstaff.*

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* Reprinted with permission. VOCATIONAL EDUCATION JOURNAL. March, 1993.

Activity 30-60 minutes

Review the factors in the narrative from SCHOOL GIRLS and the AAUW Report SHORTCHANGING GIRLS, SHORTCHANGING AMERICA *(pg. 16, 17)*. For each of the factors related to gender stereotyping, try to identify actions educators take that produce these effects. In small groups, discuss the possible educational practices that lead to the deficits that are described. What are ways to ameliorate these effects?

for Notes

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for Notes

GENDER EQUITY in the CLASSROOM

Activity — 10 minutes

Read the handout "Assessing the Climate" *(pg. 28)* at this time. Check the items that represent your typical behavior.

ORGANIZING THEME: GENDER, THE CLASSROOM AND STUDENT LEARNING — 120 minutes · 1 or 2 sessions

Since the issuance of THE AAUW REPORT: HOW SCHOOLS SHORTCHANGE GIRLS in 1992, considerable interest has been directed to the findings and to a consideration of ways classrooms can be made more equitable for all students. Wheeler (1993) captures the essence of the AAUW-commissioned study as she states:

> HOW SCHOOLS SHORTCHANGE GIRLS revealed national trends among schools and between boys as a group and girls as a group. Susan Bailey and her colleagues* concluded that, in general, although girls and boys may be sharing the same classrooms, they are not receiving the same education. Whether one is examining student or teacher attitudes and expectations, role models, teaching techniques, student participation in class, curriculum design and materials, or athletics and extra-curricular activities, it is evident that girls are being shortchanged in terms of both the quantity and quality of their education. *(page 3)*
>
> ***NOTE:***
> *Susan McGee Bailey is director of the Center for Research on Women at Wellesley College and headed the team of researchers who completed the study HOW SCHOOLS SHORTCHANGE GIRLS for the American Association of University Women Educational Foundation. The publication resulted from the review of 35 reports completed by various task forces on educational reform and over 1300 studies conducted in public, for the most part coeducational K-12 classrooms. (Wheeler, 1993)*

Some of the findings incorporated in the AAUW REPORT are given in Unit 3. In this unit, focus is on ways to CHANGE classrooms to make them more equitable for girls and women.

What can teachers do to improve the classroom climate for girls and women? Carol Pearson (1992) addresses the theme "Women as Learners" with particular focus on learning styles. (A copy of her paper is included at the end of this unit.) She observes that "Most women but not all have different learning preferences from the majority of men. A minority of men prefer to learn in ways similar to the majority of women. However, learning environments have tended to reward and reinforce disproportionately those particular learning styles and modes preferred by the majority of males." In discussing various implications of her research for classroom teachers, she notes: "All students benefit from increasing their capacity to learn in different ways. Just as women frequently need to learn and work in the preferred male way, men who now work side by side with women are advantaged not only by understanding and appreciating women's ways of knowing and doing but also by developing their own capacities for learning in these modes. When teachers use a variety of teaching modes to reach students with different learning preferences, they provide a complete learning experience for ALL students, whether male or female..."

What can teachers do — *specifically* — to improve the classroom climate for girls and women? What can teachers do to improve the climate for boys and men? The suggestions that follow were derived from two recent resources: (1) "Making It Happen: Gender Equitable Classrooms" by Elois Scott and Heather McCollum which appeared in the book GENDER AND EDUCATION edited by Sari Knopp Biklen and Diane Pollard; (2) HOW SCHOOLS CAN STOP SHORTCHANGING GIRLS (AND BOYS): GENDER EQUITY STRATEGIES by Kathryn A. Wheeler, a special report published by the Center for Research on Women at Wellesley College.

SCOTT AND MCCOLLUM

Scott and McCollum give ten specific ways to create gender-fair education. In some instances, the authors seem to be addressing the needs of very young children. Nonetheless, their suggestions can be considered by teachers of older youth and adapted, as appropriate. Their recommendations include the following *(pages 186-187)*:

1. "Eliminate assignment of sex-stereotyped tasks; provide opportunities for all children to participate in all activities."

2. "Teach good practice by modeling sex-equitable behavior."

3. "Challenge misconceptions of race and gender by raising these topics in class discussions."

4. "Organize classes so that students do not segregate themselves by sex."

5. "Eliminate direct instruction and/or interpersonal interactions which support learning only traditional sex roles; provide opportunities for children to explore a variety of areas and to see role models in a variety of professions."

6. "Examine instructional materials to determine if they are sex biased, sex fair, or sex affirmative."

for Notes

7. "Participate in revising school rules and make suggestions on the physical arrangements of classrooms to ensure that they are sex fair."

8. "Encourage girls to play with (to have 'hands-on') equipment that is typically reserved for boys."

9. "Structure group projects so that girls will have an equal opportunity to participate."

10. "Provide opportunities for cooperative learning activities to take place with groups of boys and girls."

DISCUSSION QUESTIONS

Share examples of ways schools have already implemented one or more of the Scott and McCollum suggestions.

Give examples to illustrate ways each of the ten suggestions can be implemented immediately in most schools.

What are some typical tasks that may be assigned to students based on sex-stereotyping? Give examples for both secondary and college classrooms. Are any of these examples valid uses of stereotyping?

How many participants have spoken directly to students about gender issues? What prompted the occasions? What were the results?

What are some ways in which teachers model sex-equitable behavior? What ways have been most effective?

What are some examples of career exploration activities currently made available in schools? in colleges? How successful are they in stimulating interests of girls and women in nontraditional career fields? How could these activities be improved? Who on the school or college staff should take responsibility for promoting change?

What are some examples of cooperative learning activities that might take place in secondary or college classrooms? It is often said that merely placing students together in small groups does not ensure equality of participation. How can teachers ensure that each student is adequately included in cooperative learning situations?

SOURCE

Scott, Elois and McCollum, Heather, "Making It Happen: Gender Equitable Classrooms," in S. K. Biklen and D. Pollard, Eds. (1993) GENDER AND EDUCATION, 92nd Yearbook of the National Society for the Study of Education.

Wheeler

Wheeler has produced a practical manual for K-12 educators that contains strategies to foster gender equity. A few of her ideas that teachers will find useful include:

- "Teach students to observe each other's behavior and to discuss gender-biased behavior when it occurs..." *(page 34)*.
- "Create opportunities for girls to challenge themselves in ways they have traditionally been 'protected' from. For example, have girls take apart a computer, change oil in a car, dissect an animal, or rock climb" *(page 34)*.
- "Celebrate the achievements of men and women who have succeeded in nontraditional roles... Study women and men who have challenged the status quo and worked to change injustices" *(page 42)*.
- "Design lessons to be explorations with many approaches and perspectives rather than precise answers. For example, in subjects such as literature and social sciences, which encourage multiple interpretations, use open-ended questions rather than yes/no questions" *(page 38)*.
- "Work with students to develop their public speaking skills through role-playing, theater, debates and giving talks to classes. Raise their awareness of the qualities of effective listeners. Insist that both boys and girls exhibit attentive listening behavior" *(page 40)*.
- "Be aware of the biases in your curriculum materials — including library materials. Discuss curriculum bias with students..." *(page 42)*.
- "Create an environment where students feel safe expressing themselves openly and honestly — a place where students can express a range of emotions and ask questions without feeling self-conscious. Check with students to ensure that they feel this way" *(page 45)*.
- "Pay attention to group dynamics — who speaks, how often, for how long, in what order, and who interrupts whom. Establish guidelines for the most 'equitable air time' possible and actively discourage students from interrupting each other. Don't simply ignore interruptions" *(page 46)*.
- "Encourage boys to resist cultural stereotypes. Boys experience tremendous pressure to be 'macho,' 'unemotional,' and 'independent,' often at great personal cost. Nurture the holistic development of both their relational and individualistic qualities and support them in learning how to resist peer pressure" *(page 35)*.

for Notes

SOURCE

Wheeler, Kathryn A. (1993) HOW SCHOOLS CAN STOP SHORTCHANGING GIRLS (AND BOYS): GENDER EQUITY STRATEGIES. Wellesley, MA: Wellesley Center for Research on Women. With permission of Ms. Wheeler.

for Notes

DISCUSSION QUESTIONS

What are some ideas for classroom practices that can be added to the Wheeler suggestions?

Which of Wheeler's suggestions apply to boys and men as well as girls and women?

What are some examples of ways a teacher might prompt students to notice gender-biased behavior?

What are some examples of gender-biased behavior that are commonly observed in school classrooms? In college classrooms? Give some examples of ways students themselves can confront and stop (or reduce) such behavior.

Career choices should be made by the individual based on job requirements and an assessment of one's interests and potential. In addition to better pay, what are some reasons to encourage students to explore and prepare for nontraditional careers?

Give examples of occasions when teachers have "protected" a male or female primarily because of his/her gender. To what extent was the protection conditioned by culture?

What are the chief characteristics of an environment where students feel safe expressing themselves openly and honestly? What responsibilities does the teacher assume to maintain such an environment? Do participants feel comfortable with these responsibilities? What assistance, if any, do they think they need?

Activity — 90-120 minutes

This activity is centered on the content of two articles from the literature on gender (pgs. 29-46):

- Noddings, Nel. "The Gender Issue." Reprinted with permission from EDUCATIONAL LEADERSHIP, December 1991/January 1992. Copyright by the Association for Supervision and Curriculum Development, ASCD.
- Pearson, Carol S. "Women as Learners: Diversity and Educational Quality." Reprinted with permission from JOURNAL FOR DEVELOPMENTAL EDUCATION, Winter, 1992. Copyright by Appalachian State University.

Divide into two groups with one group to exchange ideas on the implications of the Noddings paper for classroom teachers and the second group to exchange ideas on the implications of the Pearson paper. Prepare a written summary of new knowledge gained from the papers that has practical value for teachers in schools and colleges.

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ASSESSING THE CLIMATE

A Personal Checklist for Educators Committed to Equity

- ☐ Using nonsexist language, i.e., not referring to doctors, athletes and lawyers as "he" and nurses, secretaries, and hair stylists as "she."
- ☐ Using examples in teaching which show men and women with a wide range of feelings, interests, and career choices.
- ☐ Supplementing inadequate treatment of either sex in classroom materials by adding information and by discussing the inaccurate information, portrayal of roles, etc.
- ☐ Avoiding comparison of students based on gender, e.g., "the girls' papers are much neater than the boys'."
- ☐ Giving equal attention to girls and boys; assigning classroom, library, gym, and office jobs without regard for gender.
- ☐ Allowing students to express values and feelings without regard to sex, i.e., both boys and girls can be assertive and gentle, etc.
- ☐ Helping students explore all vocational interests, not only those traditionally associated with their sex.
- ☐ Expecting equal academic performance from girls and boys in all subjects.
- ☐ Expecting the same range of behaviors, language, dress from boys and girls; disciplinary responses are equitable both in terms of swiftness and severity.
- ☐ Using visual materials in classrooms and public areas which depict women, men, girls, and boys in a wide range of activities, careers, etc.
- ☐ Ensuring that all printed materials equally feature and report the extracurricular achievements and activities of all students.
- ☐ Encouraging boys and girls to participate in a variety of extracurricular activities and to compete for leadership positions in clubs and class activities.
- ☐ Challenging sexist language, expectations, and behavior displayed by students, colleagues, and parents.

SOURCE

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WOMEN AS LEARNERS: DIVERSITY AND EDUCATIONAL QUALITY

By Carol S. Pearson

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ABSTRACT: This article examines gender differences in learning in order to help educators create learning environments which equally foster the intellectual development of both male and female students. It surveys recent theories on learning styles, cognitive development, and cultural difference to make practical recommendations for instructional design. Suggested accommodations for honoring women students' preferences and styles of learning in the college classroom, in turn, improve the learning experience for all students.

The subject of gender differences is fraught with dangers. For many people, any suggestion of difference immediately brings to mind a hierarchy where one group is better and the other worse. Women fear that noticing gender differences will mean that women will be seen as having "special needs" which need remediation or that they will be viewed as polar opposites of men. However, since ignoring difference has a price for women — especially those women most unlike the men who set the norm — it is important to address the issue. The challenge then is to confront it, insofar as possible, in its full complexity. We do not have to all be the same to be equally important.

Perhaps the most cutting-edge development in education today is the understanding of different gifts. When we understand that people learn differently, it opens the possibilities of tapping everyone's true potential. If we inadvertently teach in a way that matches some student's learning styles and not others, the disadvantaged students may begin to believe they are inferior. If we learn to see difference as a strength, rather than a problem, and take a scientific look at how diverse groups best learn, levels of achievement and self-esteem may soar beyond what we have previously thought possible.

This paper explores the topic of gender differences in learning as one contribution to help educators create learning environments which equally foster the intellectual development of both male and female students.

Learning Style/Learning Preference

Research on personality type and learning style has identified some thought-provoking differences in learning preference between the sexes even though the researchers in question did not set out to look for gender differences. Of the many approaches to our understanding of gender preference in learning styles, three variables seem to be most critical: thinking and feeling as cognitive modes in decision making, apprehension and comprehension in perception, and field sensitivity and field independence in the learning environment.

In each variable, it is critical to understand that learning *style* is an indicator of *preference* and of ease in the learning task. It is *not* an indicator of ability to perform a task. Usually, however, people tend to be stronger in their preferred

modes if for no other reason than they practice them more. Individuals and groups who are in learning environments which require and reward learning styles different than their own are disadvantaged. To the degree that students have no concept or vocabulary to name and understand this phenomenon, they may also internalize their failure and lose confidence while feeling alienated from the teacher, the class or school, and the content in question.

Accordingly, if education for women unconsciously follows a traditional model of education which was designed originally for men and their preferred ways of knowing, some women may not only be disadvantaged as learners but also experience alienation from the learning environment and/or a loss of confidence in their own abilities.

Gender and Learning Styles

Four widely used theoretical bases can provide tools to help us assess these variables in relation to gender preference in learning styles. The Myers-Briggs Type Indicator (MBTI) offers an important tool as a measure of personality type with direct implications for learning styles preference. MBTI researchers (Myers-Briggs, 1980) have found gender differences on only one preference: the preference related to decision making as evidenced in the thinking/feeling dimension of personality type.

The Myers-Briggs(1980) categories include both thinking and feeling as cognitive functions. "Thinking" cognition is an abstract, analytical, objective process, whereas "feeling" cognition is a more subjective, values-oriented, contextual process.

As learners, people who prefer the thinking mode — 3/5 to 3/4 of males (McCaulley, MacDaid, & Kainz, 1985) — like classrooms and assignments which are objective and fair and which focus on skills of analysis, critique, and debate. People who prefer the feeling mode — 2/3 of females (McCaulley et al., 1985) — like classrooms and assignments which are personal and caring (even intimate), focus on issues of value and meaning, are concerned with the relevance of ideas to life or to improving people's lives, and develop the skills of cooperation and collaboration.

Taken together, the Myers-Briggs data suggest that the majority of women — ***but not all women*** (1/3 of women prefer the "thinking" and more impersonal classroom environment [McCaulley et al., 1985]) — learn with more ease and facility in classrooms which: (a) are personal, intimate, and caring; (b) encourage collaborative learning and facilitate classroom discussions in which truth is investigated through individuals building upon each other's ideas (rather than critiquing or debating with them); and (c) show concern for questions of meaning, values, social relevance, and the human impact of ideas.

Another valuable tool is the Kolb Learning Styles Inventory (LSI), designed explicitly for gathering information about how people learn (Smith & Kolb, 1986). This tool measures two major variables: (a) the way we *perceive* new information and (b) the way we *process* what we perceive. According to David Kolb, people can perceive new information either by direct apprehension of immediate concrete experience or by indirect comprehension of symbolic representations of experience. The information is then processed either by an internal system of observation and reflection or by active experimentation. The two choices — one on each

dimension — give rise to four major learning styles: concrete experience, reflective observation, abstract conceptualization, and active experimentation.

Although Kolb's (Smith & Kolb, 1986) research indicates males' and females' preferences for processing information are equally distributed, it indicates a majority (59%) of females show a preference for perceiving new information through "apprehension" (concrete experience), while a majority (59%) of men prefer "comprehension" (abstract conceptualization).

Apprehension or concrete experience refers to perception through our senses and feelings, in short, to direct experience of that chair and of its context. As we experience the texture and shape of the chair through our senses, we are also experiencing the look, feel, sounds, and smells not only in the surrounding room but — if the window is open — from the outdoors as well. It also includes our mental and emotional associations, memories, and fantasies. It is a rich, complex gestalt.

Comprehension or abstract conceptualization refers to our capacity to separate our awareness of a concrete item or experience (such as a chair) from its context, translate the experience to a symbol or abstraction of a chair which enables us to isolate that component of our experience, categorize it, name it, and file it away in order that we might establish the concept of "chair."

Abstract conceptualization(Kolb,1984) — preferred by a majority of males — is the mode emphasized over more contextual approaches in most college classrooms. This is not surprising if we remember that higher education, from the Greeks through the great English universities and into the Americas, was a male-only privilege until well into the 19th century. When women entered academe, differences from the male norm were simply assumed to be deficits(Minnich, 1988).

Kolb's (1984) findings are similar to those of educators who examine field independence/field sensitivity as a learning style preference. Witkin initiated work on this subject (Witkin, Moore, Goodenough, & Cox, 1977), although his original labeling of the two preferences as "field independence" and "field dependence" indicates some gender bias. Briefly, field sensitive learners think holistically and prefer to make connections among facts, theory, and personal experience. They are also highly influenced by the *context* in which learning takes place: personal interactions and feelings about the teacher, the support of peers, and what they are experiencing in other parts of their lives. Field independent learners, on the other hand, are more interested in concepts for their own sake, prefer learning isolated information in a more impersonal environment, and are more likely to have self-defined goals.

A majority of females as well as Blacks and Hispanics of both sexes tend toward field sensitivity (Witkin et al., 1977; Howard, 1987) and are therefore most likely to have environmental factors interfere with their learning in and out of the classroom. Moreover, a single focus on field independent learning disadvantages *all* students because they are never pushed to balance impersonal learning with the more global, contextual, integrated approach.

Belenky, Clinchy, Goldberger, and Tarule (1986) have added new depth to our understanding of the way women learn. Their work focuses on women's preference for "connected knowing" (consciously subjective, involved, integrative, and empathetic) as contrasted with "separated knowing" (objective, removed, and abstract) fostered in formal, higher-education environments. The researchers

stress the integrity of the connected learning system in its own right: It does not result from an inability to be abstract, analytical, objective, and critical and is not necessarily better or worse than separated learning. But it should be accorded equal validity.

Many women take naturally to connected knowing, finding it easier to follow authors than to attack them, easier to get close to them to stand apart; but they do not always find it easy to enter perspectives very different from their own. This requires real skill and effort. It is important to distinguish between the effortless intuition of subjectivism (in which one identifies with positions that feel right) and the deliberate, imaginative extension of one's understanding into postions that initially feel wrong or remote. Connected knowing involves feeling, because it is rooted in relationship; but it also involves thought... it entails "generous thinking" and "receptive rationality."

Connected knowing is just as procedural as separate knowing, although its procedures have not yet been as elaborately codified.(pg. 120)

Connected knowing is integrated and interdisciplinary. Separated knowing divides knowledge into fields or disciplines.

Learning Styles: Conclusion

Together, the gender implications of Myers-Briggs, Kolb, field independence/field sensitivity, and the Belenky, et al. study furnish us with many recurring themes: the majority of — but not all — women prefer collaborative, intimate learning settings; learning experiences which integrate theory with experience; and cognition processes which utilize feeling and empathy as well as thought. Women's thought, generally, tends to strive to be holistic, complete, and inclusive in terms of recognizing both external and internal complexity.

But what does all this mean? Most women, but not by any means all, have different learning preferences from the majority of men. A minority of men prefer to learn in ways similar to the majority of women. However, learning environments have tended to reward and reinforce disproportionately those particular learning styles and modes preferred by the majority of males. This tendency is so severe that modes preferred by the majority of women may either not be acknowledged at all (as ways of attaining knowledge), or they may be assumed to be lesser, even inadequate modes.

Women's Development as Learners

This failure of the learning environment to provide names for women's learning experiences and to teach methodologies and procedures in the feeling, apprehensive, and connected modalities has implications for women's development which are complex at best. The lack of role models and vocabularies to support many women's preferred ways of knowing tends, on the one hand, to retard women's development. Women keep having to reinvent the wheel so to speak. Each woman and each generation of women have to rediscover women's ways of knowing.

On the other hand, as Anne Wilson Schaef (1981) has pointed out in *Women's Reality: The Emerging Female System in a White Male Society*, the very fact that women who do recreate their own system know two systems, while most males know only one, pushes women to attain a certain complexity of thinking. Women

who fit a typical female profile — relational, contextual, multivariate in their thinking — and yet also manage or succeed in a White male society do so because they have mastered both systems. The female system grounds them, allowing them to speak in their own voices. Knowledge of a White male system makes it possible to interact effectively with major societal institutions such as colleges and universities or the business world. Nevertheless, the challenge of understanding and using both systems also complicates the task of women's cognitive development.

Inspired by Carol Gilligan's (1981) groundbreaking work on women's moral development, Belenky et al. (1986) looked at cognitive development in women and recognized that there were issues involved which were not accounted for in Perry's (1978) theories. For one thing, women have less confidence than men (probably as a result of less societal reinforcement). Whereas the key issue for men in moving from Perry's Position II (dualism) to Positions III and IV (early and late multiplicity) is to have their faith in truth (including their own perceptions) shaken up, women have too little faith in their own perceptions already. Therefore, women need at this critical juncture to learn to turn inward with confidence.

Belenky et al. (1986) found that almost half of the women in their sample had moved past the simple belief that truth resides in authorities, but they had not moved toward the early multiplist idea that anyone's opinion was as good as anyone else's. Instead, they moved toward a faith in their own inner voices. This was not so much a faith in their "opinion" which might be challenged but from an outer to an "inner authority." Subsequent stages of development, to women, involve developing ways to think through the advice of that inner voice: to check this intuitive wisdom against other information. Although some women moved into a mode of procedural reasoning not unlike that fostered by colleges and universities and preferred by the majority of males, a majority of the women studied developed the procedural mode of "connected knowing" where learning takes place in community and involves everybody.

Beyond this procedural focus is a mode very like Perry's (1978) Position V (contextual relativism) which Belenky et al. (1986) call constructed knowing. At this stage, women understand that all knowledge is constructed and that "truth" is a relative term. However — and this is perhaps where the increasing complexity of women's environmental situation is helpful — the women studied seem to have integrated many of the understandings of Perry's subsequent positions, combining relativism with commitment. Since women's development involves both thinking and feeling all along, women as constructed knowers are not dispassionate, objective learners. Indeed, Belenky and colleagues speak of constructed knowing as "passionate scholarship."

Cognitive Development

Belenky et al. (1986) were highly influenced by William Perry's (1978) system for identifying stages of cognitive development during the college years. Basically, Perry's system traces various perspectives students go through in moving from a simple belief that truth exists and authorities know the answers to a position of contextual relativism. Beyond the college years, Perry shows how people struggle with issues of commitment without absolutes.

Perry and Lee Knefelkamp (Knefelkamp, 1980) codified these perspectives into series of discrete stages or positions. The college years foster development

between Position II and IV. At Postion II (dualism) students believe absolute truth exists and authorities know what it is. At Positions III and IV (early and late multiplicity) truth is recognized to be multiple. Gradually students move from a belief that anyone's truth is as good as anyone else's to an increasingly complex ability to assess the merits of relative truth. At Position V (contextual relativism) students gain the understanding that authority is earned through having expertise, even if that expertise is partial and relative.

Recognizing Diversity

What we have discussed so far is just the tip of the iceberg of emergent research affecting our knowledge of gender and learning styles. Research on Neuro-Linguistic Programming (Lewis & Pucelik, 1982), for instance, shows that some students learn best visually (through what they see), some auditorily (though what they hear), and some kinesthetically (through what they actually do). Women and girls who learn kinesthetically are greatly disadvantaged by "feminine" socialization which discourages free body movement in the interest of ladylike behavior. All students benefit from environments which utilize all three of these learning modalities. Although kinesthetic learning is now deemphasized in higher education, it is important in helping women reclaim their bodies and the body's wisdom. It should be remembered as well that some women will evidence the characteristics of each of Kolb's four learning styles and Myers-Briggs' 16 personality types.

Women likewise differ according to culture. Significant research has been done on culture, ethnicity, and learning preferences which indicates that learning environments tend to be biased by culture as well as by gender (Howard, 1987). Just as female socialization discourages competition, traditional Mexican-American cultures strongly emphasize the importance of pulling together and helping others and deemphasize rivalry and competition.

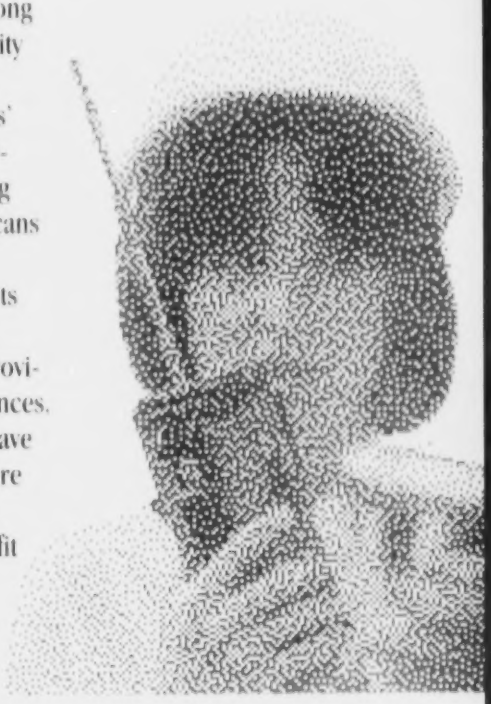
Expectations about adult-child and student-teacher relations also vary by culture. For example, most teachers expect eye contact as a sign of respect, attention, and honesty. However, in many cultures it is considered insolent for a child to look straight into the eyes of an authority figure. In low-income urban Black communities adults are not automatically given respect by children but must earn it. Conversely, in Mexican-American cultures respect is automatically given an adult, yet Mexican-American students expect friendly and quite personal relationships with adults. In traditional Native-American culture a young person is expected not to disagree with an authority figure, especially one seen as old or wise, so asking Native-American students to demonstrate knowledge by debating with the teacher puts them in an untenable position (Howard, 1987).

Educators who are uneducated about differing cultural rules may lose some minority students and alienate others; certainly, they widely misinterpret actions. They also lose an opportunity for cultural richness. Scholars such as Edwin Nichols (1976) have demonstrated that each major culture has its own epistemology, logic, and processes for learning and acting. Many of the basic premises about education — its goals and its processes — may seem alien to people of other than European extraction. For example, the concern with the individual acquisition of knowledge (and with the acquisition of status and money through careers) as a major goal of education is consistent with European epistemology

according to Nichols but inconsistent with those of African and Afro-American cultures (which place a higher value on interpersonal relationships between people) and Asian and Asian-American cultures (which place their highest value on the cohesiveness of the group).

The respect for student diversity would include a respect for different philosophical premises and learning processes. Higher education as a whole is a long way away from offering learning experiences which allow significant opportunity to find truth through the African mode of "symbolic imagery and rhythm" or through the Asian approach of "striving toward transcendence," to use Nichols' (1976) categories. To allow all students to benefit from the philosophical perspectives of African and Asian epistemologies as well as the cognitive "counting and measuring" emphasis Nichols finds typical of Europeans and Euro-Americans would add depth as well as diversity to the educational experience.

Learning environments adequate to the full development of women students must allow for diversity of temperament, type, learning style, and culture. Practically, this requires an understanding of diversity by educators and the provision of learning environments that allow for both individual and group differences. Finally, women require an atmosphere in which students as well as teachers have the vocabulary to name and understand diversity in a context of equality. Where difference is presented as a source of richness and strength, individuals and groups can claim their uniqueness without apology, and all students can benefit from learning from each other's perceptions and gifts.



Implications for Classroom Teaching

While aggregate theories and findings about women's preferences in the learning process are helpful to educators in designing educational experiences for women, caution should be observed. It is worth some time and trouble to determine the particular learning preferences of the group in question. It would be unfortunate to develop pedagogical approaches based on generalizations about preferences of the majority of women and then find your population to be atypical. However, since most learning groups are very diverse, if it is not practical to test the students, it is generally appropriate to create classrooms which are more flexible and diverse than most classrooms are now. All students benefit from increasing their capacity to learn in different ways. Just as women frequently need to learn and work in the preferred male way, men who now work side-by-side with women are disadvantaged not only by understanding and appreciating women's ways of knowing and doing but also by developing their own capacities for learning in these modes.

When teachers use a variety of teaching modes to reach students with different learning preferences, they provide a complete learning experience for all students, whether male or female. Although we all learn best in our preferred modes, learning the same thing in more than one way reinforces learning. For example, when we teach using visual, audio, and kinesthetic modes all students learn more easily. Auditory modes include lecture and discussion; visual modes include visual aids or even writing outlines and key terms on the board. Kinesthetic modes require providing exercises, labs, or other forms of experiential learning that give students a chance to learn by doing.

When we provide experiences which tap the "feeling" and "thinking" modes of decision-making, we not only advantage students with those preferences, we also speak to the feeling and the thinking side of each student, thus creating a more complete learning experience for everyone. A classroom which balances the needs of feeling and thinking is warm and friendly but does not back off from conflict or from high standards. Students are called by name, and people feel cared about, but they also are called upon to stretch and achieve. Such classes include discussions of personal experiences, feelings, and values. Discussion is often collaborative and harmonious with one person building on other's insights. This feeling side can be balanced with thinking modes like analysis, theory, rigorous standards,and critical debate. Warmth and caring do not have to mean that anything goes or every answer is right.

To facilitate learning for students who reflect the feeling mode on the MBTI and the apprehension mode on the Kolb, imaginative teachers can teach through story telling or through creative visualization (Harris, Silverstein, & Andrews, 1989). In a geology course, for example, these students may learn best by personifying the mountain, telling its story as it changes over time.

Understanding learning styles can even help faculty write more effective comments on exams and papers. For example, a thinking-type student might be motivated to work harder by confrontation: a note indicating that you know they are not achieving to their fullest. A feeling-type student might be completely demoralized by the same note. Feeling-type students — whether male or female — want to know you value them. For them, bonding precedes learning. Therefore, it is more effective to make to make clear in your comment that you value something about them, and you want them to succeed. Then tell them what they need to do to perform at a higher level.

Educational environments are most successful which (a) balance challenge and support and (b) build on students' areas of strength in order to help remediate areas of weakness. In the teaching of most women, this means that it is counterproductive, for example, to teach a subject which requires high spatial ability in a mode which stresses independent and competitive learning and rational, objective analysis in a cold, impersonal environment. The challenge is too great. Most female students, and male students with a preference for feeling and apprehension, can excel in content areas which are inherently thinking and abstract — such as mathematics or computer science — if the stretch required on the content is balanced by pedagogical methods and a classroom climate which is supportive, intimate, and where the value of the endeavor (to others) is explicit.

Faculty can provide choices in assignments which allow students to show what they know in their own learning mode. For example, a thinking student might prefer an analytic paper and a feeling student a more narrative paper or one exploring the values in question. Similarly, students high on Kolb's comprehension may find it easy and appropriate to separate out context and look at issues only from the perspective of their discipline whereas students high on apprehension see everything in context. The latter group is helped by assignments which are more interdisciplinary and which allow them to imbed their learning in the context of their life experiences or political, social, and cultural realities.

My own work on archetypal dimensions of human growth and development (Pearson, 1986, 1991) suggests that it is possible to awaken the Warrior or Sage

archetypes in women (or men with a preference for feeling or apprehension) and, in doing so, enable them to learn more easily in their less preferred modes. Awakening such archetypes involves using the imagination: identifying with a role model of one's own sex and race, role playing, and visualizing oneself as a Warrior or Sage (or other archetype) successfully acting out that archetype's story.

Equally important to educators is attention to the impact of the "informal curriculum" on women students. Since women tend toward field sensitivity, they will be highly influenced by the unofficial curriculum. As Elizabeth Dodson Gray (1988) argues in "The Culture of Separated Desks," many educators still ignore the informal curriculum, acting as if the formal curriculum occurred in a vacuum. For example, the physical arrangement of the room (desks in a circle or in rows facing a podium) tells students much about a teacher's expectations about the learning process (Gray, 1988). The sex and race of administrators and of high-status professors communicate otherwise unstated assumptions about who is expected to succeed. The sex and race of individuals and groups studied (and not studied) lets students know who is considered important. Peer pressure to act in certain prescribed ways by sex role has a significant impact on what behaviors students are willing to risk or not risk. Gray's findings may have further implications for field sensitive students, for whom the informal curriculum may be as central as the formal one, to learning, to failure to learn, and to failure to be able to act on what one has learned.

Faculty may not be able to change the society or even their own institution, but they can work to create a gender and racially equitable classroom. We can begin by noticing who we call on most often, whose names we know, how long we give certain students to think before we assume they do not know the answer, and what tone of voice we use to what student. It makes a difference if we make eye contact as often with women and minority males as we do with White males, and if we call on them and know their names. We also need to know enough to recognize differential cues. For example, many women students naturally bring in personal material to the classroom. Instead of telling the student that material is inappropriate, the personal anecdote can be used as a spring-board to a greater conceptual understanding. The teacher who understands that Black males who talk without raising their hands, Hispanics who do not make eye contact, Native-Americans who say little, or Asians who are disinclined to challenge ideas or authority are not being disrespectful, lazy, or inappropriate demonstrates a level of understanding and cultural respect which provides a model for every student they teach.

Students are more likely to participate in class when the course includes materials from their gender or ethnic group (Thorne, 1989). Women and minority males also need to be validated more than the typical White male for their achievements to counter the effects of internalized racism and sexism. Further, if gender and cultural differences are discussed and hence legitimized in a way which does not invoke guilt or blame, students can relax, be themselves, and learn. It is important, however, in discussing these issues to avoid stereotyping. All women, all Blacks, and all White males, for that matter, do not act alike. Cultural and learning modes can be discussed in a way that expands options for all students, rather than creating boxes that separate students from one another.

Recognizing difference by learning style, gender, and culture has the added advantage of fostering cognitive development. The more we assume a single stan-

dard for how things should be taught, the more we reinforce absolutist and dualistic thinking. Helping students understand different realities and gifts helps them with what is perhaps the most critical intellectual task of the college years: moving from the idea of absolute truth to an understanding that all truth is constructed, relative, and partial. Further, the more we integrate feeling approaches the better we equip students to have commitment to their learning and their work. The more we utilize apprehensive, contextual learning, the more students will translate abstract learning into socially useful ends. Finally, students who understand about cultural and gender differences are better prepared for the increasingly pluralistic work world of the 1990s and beyond.

Conclusion

Designing academic environments with women's learning styles in mind is a complex business which affects all students.

1. Although a majority of women demonstrate preferences that are different from those of the majority of males, a sizable minority of women prefer learning experiences and environments like those preferred by the majority of males.
2. Women who evidence the typical female profile as learners are disadvantaged in traditional educational settings (which reward learning preferences more typical of males) and traditional male professions. Their learning will be enhanced by the creation of environments more supportive of their learning styles; yet realism demands that women also gain facility with traditionally male modes of behaving (which value objectivity, competition, independence, etc.), modes which are still seen as defining the standard against which women are measured in many if not most environments.
3. Although there are many traits that the majority of women as learners share with one another, women's diversity as learners — by stage, style, mode, temperament, type, and culture — is also very great. No single learning experience will be right for all women.
4. There are few, if any, generalizations about women as learners which are not also true of some (maybe as many as 40% of) men. Thus, the kinds of changes required to maximize learning environments for women would also benefit men.

The very qualities which are strengths for many women are those which are now being called for in business and the society at large. Few analysts of our culture argue that we need to be more ego centered, more combative, more objective and abstract, or more either/or in our thinking. Indeed, people writing about the culture today are calling for more sense of care and responsibility; a greater capacity for collaboration and team spiritedness (in order to be more competitive in the world market); and more creative, complex, and multivariate thinking. Helping women to honor their own styles and preferences, then, not only makes it easier for women (and men with similar learning strengths) to claim their own voices, but it also increases the chances that, in so doing, they may enhance the society in which they live.

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THE GENDER ISSUE

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The male experience is the standard not only in education but, more generally, in all of public policy. We must change the culture of schools—and the curriculum—to reflect both women's and men's perspectives.

Instead of asking why women lag behind men in mathematics, we might ask why men lag behind women in early childhood education, nursing, and like activities.

Feminists often charge that the culture of schools, especially of secondary schools, is masculine (Grumet 1988). It's true that without realizing it, most of us look at gender issues in education with the masculine experience as the standard. What recommendations might emerge if we used the feminine perspective as our standard?

Men's Culture as the Standard

Because white men have long held most of the highly regarded positions in our society, we naturally use their experience when we think about gender, race, or ethnic equality. In an enlightened democracy, we want everyone to have access to the education and jobs formerly held by the favored group. Thus, some years ago, Congress passed legislation designed to provide more nearly equal resources for women's and men's sports in schools.

Considerable attention has also been given to attracting more women to mathematics and science. Indeed, observing a substantial lag between women's and men's participation in mathematics, researchers began to work on "the problem of women and mathematics." They did not ask what women were doing or how they had made their various choices. Rather, they assumed there was something wrong—with either women or schools—because women were not participating as men do in mathematics.

The male experience is the standard not only in education but, more generally, in all of public policy. It is supposed, for example, that women want access to the military and, even, to combat roles, and of course some women do want such access. Most professions monitor the number of women entering and see this number as an important social indicator. For the most part, this attention to equality is commendable, and few of us would suggest relaxing it.

Problems clearly arise, however, as a result of using the male experience as the standard. Law, for example, has long used a "reasonable man" standard to evaluate certain actions. In recent years, bowing to gender sensitivities, the standard has been renamed the "reasonable person" standard. The new title seems to cover men and women equally, but it was developed over many years almost entirely from male experience. Much controversy has arisen around its application to women. Consider one example.

If a man, in the heat of passion, kills his wife or her lover after discovering an adulterous alliance, he is often judged guilty of voluntary manslaughter instead of murder. If, however, the killing occurs after a "reasonable person" would have cooled off, a verdict of murder is more often found.

What happens when we try to apply this standard to women? When a woman kills an abusive husband, she rarely does it in the heat of the moment. Most women do not have the physical strength to prevail in such moments. More often the killing occurs in a quiet time—sometimes when the husband is sleeping. The woman reports acting out of fear. Often she has lived in terror for years, and a threat to her children has pushed her to kill her abuser. Many legal theorists now argue that the reasonable man standard (even if it is called a reasonable person standard) does not capture the experience of reasonable women (Taylor 1986).

Another area of concern to feminists is pregnancy and job leave. If women's lives had been used as the standard from the start, feminists argue, one can be sure that job leaves for pregnancy would have been standard procedure. But because men do not become pregnant and men have devised the standard, women must accept such leaves as a form of sick leave.

Many other examples could be given, but here I want to look at education and raise some questions rarely asked. For example, instead of asking why women lag behind men in mathematics, we might ask the following: Why do men lag behind women in elementary school teaching, early childhood education, nursing, full-time parenting, and like activities? Is there something wrong with men or with schools that this state of affairs persists?

Women's Culture as the Standard

Faced with the questions just asked, it is tempting to answer facilely that "these jobs just don't pay," and of course there is some truth in that. But elementary teaching often pays as well as high school teaching, and yet many more men enter high school teaching. In fact, neither teaching nor nursing pay as poorly as many occupations men enter in considerable numbers.

If we admit that pay is a significant factor, we still have to ask why work traditionally associated with women is so consistently ill paid. Why has so small a value been attached to work we all admit is important? It is hard to escape the conclusion that some men devalue work they have never done themselves and do not wish to do.

If women had set the standard when schools were founded and curriculums designed, what might our students be studying today? Perhaps schools would be giving far more attention to family and developmental studies. It also seems likely that these studies would not be regarded as soft, easy, or merely elective. A rigorous study of infancy, childhood, adolescence, adulthood, and old age would be coupled with a generous amount of supervised practice in care of the young and elderly. The maintenance of caring relationships might be a central topic.

An objection might be raised that these are all matters to be learned at home—not in school. But, given the dramatic changes in social conditions since the end of World War II, fewer children seem to be learning about these subjects adequately. It is questionable whether most ever learned them adequately at home. Family relationships—human relationships—are at the very heart of life, and yet they are considered peripheral to serious learning. With family life at the center of the curriculum, we could teach history, literature, and science more meaningfully than we do now.

Family relationships, human relationships, are at the very heart of life, and yet they are considered peripheral to serious learning.

A curriculum based on women's experience would occupy volumes, and I obviously cannot present a comprehensive description here. But several large areas of study might be significantly transformed if women's experience were the standard. Before we look at a few, one important caveat should be entered.

Women, like men, are all different. It is misleading to talk of a unitary "women's experience" or "women's culture." Nevertheless, strong central tendencies affect women's experience. Whether or not particular women became mothers or were involved in caregiving occupations, they all faced the expectation that a certain kind of work was appropriate for women. Women's culture has emerged out of these expectations, the work itself, and resistance to it. When I speak of women's culture, I will be referring to this common experience.

It is hard to escape the conclusion that some men devalue work they have never done themselves and do not wish to do.

Education for Citizenship

Usually when someone mentions education for citizenship, we think of courses in civics or problems of American democracy. A "citizen," in one traditional view, is a person of recognized public rank—someone entitled to the "privileges of a freeman."

Learning to take up the duties of a "freeman" is certainly important, and schools have long been charged with promoting this learning.

But there is another side to citizenship. Citizens are also inhabitants of communities, and here their duties are more positive and voluntary than those prescribed by law. Neighborliness, helpfulness, and politeness are all characteristics of people we like to live near. These are all qualities parents, especially mothers, have long tried to inculcate in their children. Given the massive social changes of the last 40 years—among them the reduction in time many mothers have available to teach their children these qualities—it may be that schools need to pay more attention to them.

Another neglected aspect of citizenship is manners. I am certainly not talking about which fork to use for a particular course at dinner, but I do think that we should educate for social life as well as intellectual life. We are alarmed when high school graduates cannot compute simple bills and the change they should expect. We should also be alarmed when they do not know how to dress, speak, or comport themselves in various settings.

Much more can be said on this subject, of course, but my main point is to draw attention to what we see when we consciously use women's culture as the standard for our educational assessments. Looking at citizenship, we see our mutual dependence on neighborliness, the graciousness of good manners, the desirability of good taste. Even when we consider what good citizens must not do, we see that people often refrain from harmful acts because they do not want to hurt their neighbors and because they want their respect. It is not always regard for abstract law that produces acceptable behavior.

Social Consciousness

If women's culture were taken more seriously in educational planning, social studies and history might have a very different emphasis. Instead of moving from war to war, ruler to ruler, one political campaign to the next, we would give far

more attention to social issues. Even before women could vote, many were crusaders against child labor, advocates for the mentally ill and retarded, teachers to immigrants, and, more generally, vigorous social reformers. (There are many sources of information on this topic; see, for example, Beard 1972, Brenzel 1983, Kinnear 1982, Smith 1970).

Many well-educated women in the 19th and early 20th century became involved in social issues because these were accepted as "women's work" and because they were unable to obtain positions commensurate with their educations (Rossiter 1982). Today we do not want to restrict women's activities to any particular sphere, but we should not devalue contributions women have made and are continuing to make to improve social conditions. Women's interest, as compared to men's interest, in social issues such as war, poverty, and childcare is revealed in a gender gap (about 20 percent) that still appears in both surveys and votes.

The point here is not so much the conventional one of insisting on the inclusion of women in history texts. More important, we must emphasize for all learners matters that have concerned women for centuries. Many contemporary feminists have this in mind when they suggest using women's culture as a standard for curricular decisions (Martin 1984, Tetreault 1986, Thompson 1986).

Peace Studies

For centuries men have participated in warfare. The warrior has been as central to male culture as motherhood to female culture. It would be untrue, however, to say that men have promoted war and women have resisted it. Women, in fact, have often supported war (Elshtain 1987). But if we look at women's culture and the outstanding women admired within it, we find heroes steadfastly opposed to war. Jane Addams, much loved for her work at Hull House and in other social causes, firmly opposed U.S. participation in World War I. She lost a significant part of her political support as a result.

Women against war. Women tried very hard and very sensibly to stop World War I and to prevent World War II. The Women's International League for Peace and Freedom (WILPF) carried a peace proposal to 35 governments, and several male leaders acknowledged the good sense of the proposal—but the war went on. The group tried again at the 1919 Peace Conference to introduce measures designed to prevent a new war. After the second World War, Emily Greene Balch, the first Secretary General of the WILPF, was awarded the Nobel Peace prize. Recounting this story, Brock-Utne quotes Gunnar Jahn, Director of the Nobel Institute:

> I want to say so much that it would have been extremely wise if the proposal ... had been accepted by the Conference. But few of the men listened to what the women had to say ... In our patriarchal world suggestions which come from women are seldom taken seriously. Sometimes it would be wise of the men to spare their condescending smiles (1985, p.5).

If women's culture were taken more seriously in planning social studies and history, instead of moving from war to war, we might give far more attention to social issues.

And yet, if we consult an encyclopedia published in the late 1940s, we find half-page entries (with pictures) of Generals Pershing and Patton but no entry for Emily Balch.

In discussing citizenship and social consciousness, I've recommended not that we eliminate the male standard and substitute a female one but, rather, that we consider both traditions as we plan curriculum and instruction. On the issue of peace, however, many feminists think that more drastic revision is required. If our children and the world itself are to be preserved, the warrior model has to give way to a model that emphasizes caring relations and not relations of force and domination (Noddings 1989).

The study of peace must be extended beyond an analysis of nations at war to a careful and continuing study of what it means to live without the fear of violence.

The ethics of care. Much is being written today about the ethics of care (Noddings 1984) and maternal thinking (Ruddick 1989). Motherhood has been an important feature of women's traditional culture, and experience in the direct care of children gives rise to interests in their preservation, growth, self-esteem, and acceptance in society. (Not all women have been mothers, of course, and not all mothers have been good mothers, but we select the best thinking and best examples as a standard for educational inclusion.) The logic of motherhood includes "preservative love" (Ruddick 1989), and this love should be in powerful opposition to war. Indeed, as Ruddick and others have described it, world protection—particularly protection from war—is a natural extension of maternal work.

We have to be careful not to oversimplify here. On the one hand, some men have also participated passionately in the quest for peace, but these men's voices have not reflected nor transformed the dominant male culture. On the other, women have often interpreted preservative love as a dedication to safeguarding not just the lives of their own children but a way of life. Preserving a way of life, paradoxically, has meant death for many children. But, despite the empirical fact of some women's support of war, the logic of maternal life is clearly anti-war, and the most eloquent voices of female culture have opposed war. Further, the arguments for peace advanced by women are frequently directly connected to the basic elements of life—love, birth, nurturing, growing, holding, creating. The distinctiveness of women's arguments and the representativeness of the voice for peace in women's culture suggest a far greater role for a female standard in education.

Women's call for peace is distinctive in another way. Many insist that peace must be studied for itself, not considered simply as the cessation of war. Peace, not war, must become central in our thinking. Further, we must not suppose that the world is "at peace" simply because major nations are not fighting. As long as substantial numbers of people live in daily fear of violence, the world is not "at peace."

Men's violence toward women. For feminists, eliminating the violence women suffer at the hands of men is part of the peace movement. Morgan has written forcefully on the cult of masculinity that maintains this violence—and war and terrorism as well:

> He glares out from the reviewing stands, where the passing troops salute him. He strides in skintight black leather across the stage, then sets his guitar on fire. He straps a hundred pounds of weaponry to his body, larger than life on the film screen. He peers down from huge glorious-leader posters, and confers with himself at sum-

mit meetings. He drives the fastest cars and wears the most opaque sunglasses. He lunges into the prize-fight ring to the sound of cheers. Whatever he dons becomes a uniform. He is a living weapon. Whatever he does at first appalls, then becomes faddish. We are told that women lust to have him. We are told that men lust to be him (1989, pp.24-25).

Both men and women suffer in a culture dominated by such images. A culture that accepts—even admires—such models does not hate war; it only hates to lose wars. It does not abhor violence; it merely deplores the deglamorization of violence. Today such themes must be carefully examined in educational settings.

A New Culture for Schools

What, then, can we do to put some of these concepts into practice? To begin, citizenship education must be broadened to include decent, responsible behavior in personal and family relationships. Both men and women have much to learn in this area. Further, social consciousness should be a central theme in social studies, literature, and science. And the study of peace must be extended beyond an analysis of nations at war to a careful and continuing study of what it means to live without the fear of violence.

Schools must give more attention to issues and practices that have long been central in women's experience, especially to childrearing, intergenerational responsibility, and nonviolent resolution of conflict. Given current conditions of poverty, crime, and child-neglect, our society may be ready to raise its evaluation of "women's work." Using standards that arise in women's culture can guide us in our educational planning toward a more caring community and a safer world.

Given current conditions of poverty, crime, and child-neglect, our society may be ready to raise its evaluation of "women's work."

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LEARNING to LEARN

for Notes

Activity 60 minutes

Read the TIME article by Barbara Ehrenreich *(pg. 51)*. In small groups, share reactions to Ehrenreich's commentary. What educational reforms are underway nationally that relate to student learning styles? What related changes have been introduced in schools in your community?

RIGHT BRAIN, LEFT BRAIN IMPLICATIONS FOR TEACHING* 60 minutes

It needs to be stressed at the outset of this unit that the literature supporting the idea of "a different brain" may be compelling, but the implications for human development and learning are not clear. The topic is included here because we are so quick to stereotype and assume the inevitability of behavior, i.e., "boys will be boys." As educators, we need to keep up with scientific inquiry which can help us be better teachers, counselors and administrators. In that sense, we approach the subject. In that sense, too, it is valid to conclude that the current research tells us that environment (nurture) may not be "everything." Beyond that, we should not extrapolate from very meager data to conclude that there is something innate and therefore "fixed" about the circuitry of female and male brains that carries over to their "teachability." Rather, an understanding of our inheritances adds excitement to the educator's task. As stated by Gorman and Nash (1992), "The physical and chemical differences between the brains of the two sexes may be malleable and subject to change by experience; certainly an event or act of learning can directly affect the brain's biochemistry and physiology..."

Periodically over the last twenty years, at least, a recurring theme has appeared in both professional and popular literature suggesting that physical and biological differences exist between the brains of females and males. The idea sells magazines, witness the TIME cover story "Sizing Up The Sexes:Scientists Are

* Ideas are based on writings and lectures by Professor Carole Funk, Texas Women's College, Professor Donna Keenan and Professor Michael Smith, University of North Florida. With permission of Drs. Funk, Smith and Keenan.

Discovering That Gender Differences Have As Much To Do With The Biology Of The Brain As With The Way We Are Raised" (TIME, January 20, 1992). Even more recently NEWSWEEK ran a cover story "The New Science Of The Brain" with the subtitle "Why Men and Women Think Differently" (NEWSWEEK, March 27, 1995).

Where are we today in our attempt to understand the human brain? We can accept that physiological differences between males and females result from hormones that "sex" the brains of fetuses in unique ways that affect both activity and performance. Christine deLacoste, in her study of brain physiology at Southwestern Medical Center Forensics Institute, found actual physical differences between male and female brains and suggested that the female and male brains are actually "wired" in distinctly different ways. Additional research supports deLacoste's finding, indicating that male and female brains have not only different circuitry but also different physiology, chemistry, and information processing (deSimone and Durden-Smith, 1983).

The corpus callosum is the thick bundle of fibers connecting the right and left hemispheres of the brain. According to deLacoste in her original research and confirmed in later studies, the corpus callosum is twice as large in females than it is in males. With this larger link between the two hemispheres, females appear to have a stronger connection between their logical left hemispheres and their creative, affective right hemispheres, allowing females to switch back and forth between the hemispheres more easily than can males.

The studies of deLacoste, deSimone and Durden-Smith and others indicate that males have more specialization in the function of their brain hemispheres and that the male brain seems to be more lateralized in the left hemisphere. Accordingly, language skill sites appear to be more localized in the left hemisphere of males; however, in females, language ability appears to be evenly divided between the hemispheres with no lateralization.

In their study of cerebral preference in information processing, Keenan and Smith (1980) reported on a study by Sperry and associates (1973) in which they identified the different information processing characteristics of the two hemispheres of the human brain. ***Edwards (1989) provides a description of left and right hemisphere modal characteristics located through the research of Sperry and others into brain lateralization. That description appears in the accompanying handout, "Working Up a Storm on Both Sides of the Brain" (pg. 53).***

What does all of this have to do with gender equity? It contributes to our understanding of differences in predispositions for learning and then prompts us to think of ways to individualize instruction.

Differing brain chemistries and physiologies suggest that many males tend to have more difficulty reading, more dyslexia, more stuttering, more hyperactivity

and more autism. Females as a rule tend to be superior in language skills and appear to have better verbal access to their emotional world in their right hemispheres. In contrast, males appear to be better at math and computational skills than are females who tend to apply verbal strategies to math problems.

Problem-solving is accomplished in different ways for the sexes. Males visualize problems and problem-solve with images using their right hemisphere's penchant for visual-spatial relations to mentally rotate three-dimensional figures.

Females, however, problem-solve with words, reinforcing the larger connection between the left and right hemispheres. They respond more to people and context. Males seem to have less access to feelings because of their brain lateralization and appear to be more rule-bound and single-minded as a result.

The brain of females appears to be more intuitive, integrating both verbal and non-verbal information. Research with infants suggests that the female brain also seems to be more sensitive to sound and to tone of voice. As adults, males, because of a "burst" of testosterone, tend to react to stress with aggression. Females, influenced by estrogen and progesterone, tend to respond to stress with depression.

The foregoing are statistical "tendencies." These are all generalities, and they do not apply to ALL females or ALL males. As Barbara Ehrenreich comments at the close of her article "Making Sense of la Difference" (1992) in which she discusses the issues of innate mental differences between the sexes:

> *However science eventually defines it, la difference can be amplified or minimized by human cultural arrangements; the choice is up to us, and not our genes.*

What are some of the implications for the teaching of girls and women? A few suggestions follow.

- Design learning experiences that take into account the physiological brain differences which are identified between males and females. Remember that these differences CAN change with the new experiences teachers orchestrate.
- Expand teaching methodologies to include instructional techniques that are aligned with the learning styles of female (or male) students as suggested by the brain research literature.
- Teach female students to develop better spatial relations skills through concrete experiences in classroom activities. These should involve kinesthetic methods and "hands-on" materials in all subject areas, particularly in math, science, and art classes.
- Use right-mode approaches to teaching math along with left-mode approaches that favor male students. Ask students to identify and study the right-mode approaches of 20th century female artists, musicians, scientists.

for Notes

- In instructional methodologies, give both females and males assignments that call on them to integrate both verbal and non-verbal information in their responses.

A summary of recent research suggests the following implications for teaching girls and women: females have stronger links between the left and right hemispheres, utilize both hemispheres for language, are superior in language skills, tend to apply verbal strategies to math problems, and integrate verbal and non-verbal information in "intuitive" ways.

Activity — 40 minutes

In small groups of three or four persons, preferably of both sexes, devise a series of specific teaching strategies that relate to teaching girls or women. If possible, identify strategies for specific academic areas. What strategies might work equally well with males?

Additional Activity — 20 minutes

Complete "YOUR STYLE OF LEARNING AND THINKING" *(pg.54-55)*. Which items call for use of the right brain, which for left brain?

Discuss results during the workshop, if possible. Determine the male/female results in relation to right brain/left brain preferences. Do the numerical results show a left brain or right brain preference? Are the results consistent with the literature discussed in the workshop?

Share your impressions of the overall topic and describe what you consider to be the most important things you learned from the unit.

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MAKING SENSE OF LA DIFFÉRENCE*

By Barbara Ehrenreich

Few areas of science are as littered with intellectual rubbish as the study of innate mental differences between the sexes. In the 19th century, biologists held that a woman's brain was too small for intellect but large enough for household chores. When the tiny-brain theory bit the dust (elephants, after all, have bigger brains than men), scientists began a long, fruitless attempt to locate the biological basis of male superiority in various brain lobes and chromosomes. By the 1960s sociobiologists were asserting that natural selection, operating throughout the long human prehistory of hunting and gathering, had predisposed males to leadership and exploration and females to crouching around the campfire with the kids.

Recent studies suggest there may be some real differences after all. And why not? We have different hormones and body parts; it would be odd if our brains were 100% unisex. The question, as ever: What do these differences augur for our social roles, in particular the division of power and opportunity between the sexes?

Don't look to the Flintstones for an answer. However human beings whiled away their first 100,000 years or so, few of us today make a living tracking down mammoths or digging up tasty roots. Much of our genetic legacy of sex differences has already been rendered moot by that uniquely human invention: technology. Military prowess no longer depends on superior musculature or those bursts of hormones that prime the body for combat at ax range. As for exploration, women—with their lower body weight and oxygen consumption may be the more "natural" astronauts.

But suppose the feminists' worst-case scenario turns out to be true, and males really are better, on average, at certain mathematical tasks. If this tempts you to shunt all the girls back to home ec, you probably need remedial work in the statistics of "averages" yourself. Just as some women are taller and stronger than some men, some are swifter at abstract algebra. Many of the pioneers in the field of X-ray crystallography—which involves three-dimensional visualization and heavy doses of math—were female, including biophysicist Rosalind Franklin, whose work was indispensable to the discovery of the double-helical structure of DNA.

Then there is the problem that haunts all studies of "innate" sex differences: the possibility that the observed differences are really the result of lingering cultural factors. Girls' academic achievement, for example, as well as apparent aptitude and self-esteem, usually takes a nose dive at puberty. Unless nature has selected for smart girls and dumb women, something is going very wrong at about the middle-school level. Part of the problem may be that males, having been the dominant sex for a few millenniums, still tend to prefer females who make them feel stronger and smarter. Any girl who is bright enough to solve a quadratic equation is smart enough to bat her eyelashes and pretend that she can't.

Teachers too may play a larger role than nature in differentiating between the sexes. Studies show they tend to favor boys by calling on them more often and pushing them harder. Myra and David Sadker, professors of education at American University, have found that girls do better when teachers are sensitized to

gender bias and refrain from sexist language, such as the use of "man" to mean all of us. Single-sex classes in math and science can also boost female performance by eliminating favoritism and male disapproval of female achievement.

The success of such simple educational reforms only underscores the basic social issue: Given that there may be real innate mental differences between the sexes, what are we going to do about them? A female advantage in reading emotions could be interpreted to mean that males should be barred from psychiatry—or that they need more coaching. A male advantage in math could be used to confine girls to essays and sonnets—or the decision could be made to compensate by putting more effort into girls' math education. In effect, we already compensate for boys' apparent handicap in verbal skills by making reading the centerpiece of grade-school education.

We are cultural animals, and these are ultimately cultural decisions. In fact, the whole discussion of innate sexual differences is itself heavily shaped by cultural factors. Why, for example, is the study of innate differences such a sexy, well-funded topic right now, which happens to be a time of organized feminist challenge to the ancient sexual division of power? Why do the media tend to get excited when scientists find an area of difference and ignore the many reputable studies that come up with no differences at all?

However science eventually defines it, la difference can be amplified or minimized by human cultural arrangements: the choice is up to us, and not our genes.

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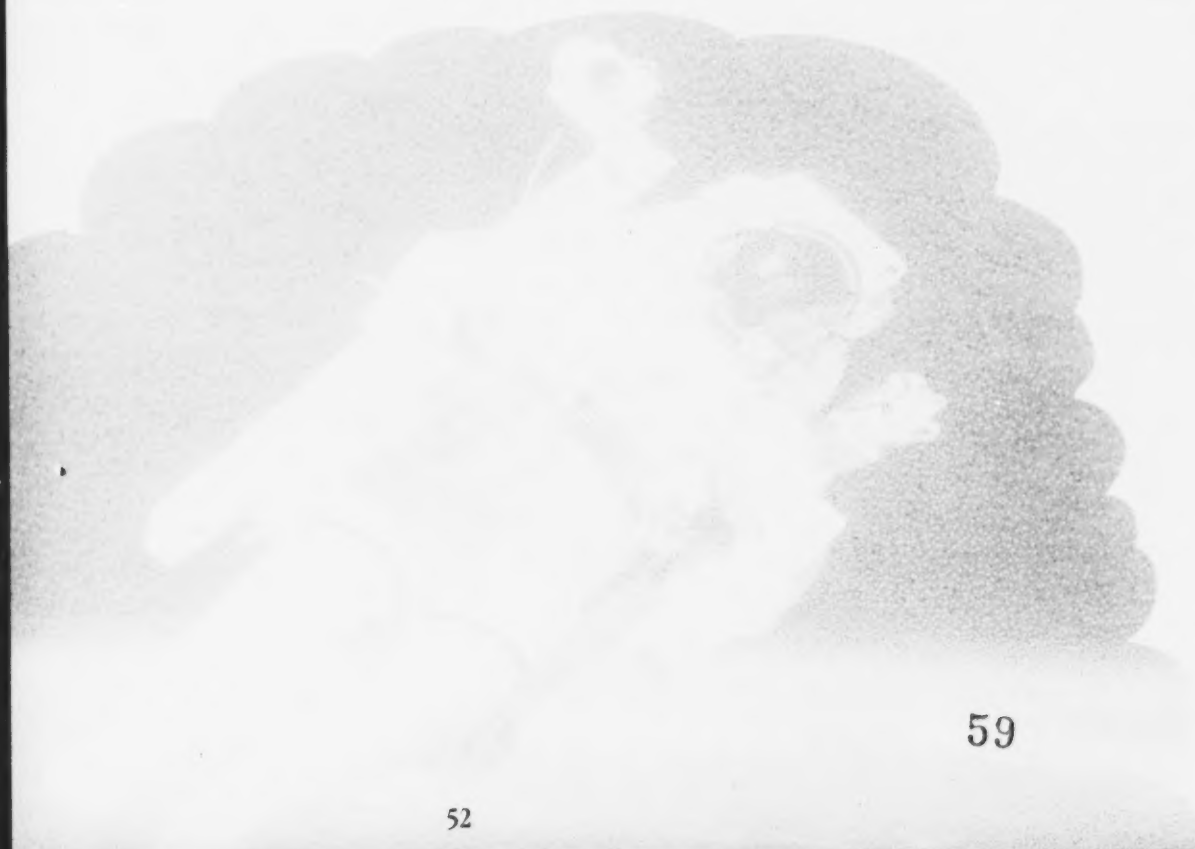

WORKING UP A STORM ON BOTH SIDES OF THE BRAIN

An exploration of drawing and problem solving activities which illustrate recent discoveries in hemispherical brain functioning, and a discussion on the implications of brain research for the school curriculum.

Characteristics of the Left and Right Hemisphere Modes of Information Processing:

LEFT-MODE	RIGHT-MODE
Verbal: Using words to name, describe, define.	**Nonverbal:** Awareness of things, but connection with words.
Analytic: Figuring things out step-by-step and part-by-part.	**Synthetic:** Putting things together to form wholes.
Symbolic: Using a symbol to stand for something. For example, the drawn form stands for eye, the sign "+" stands for the process of addition.	**Concrete:** Relating to things as they are, at the present moment.
Abstract: Taking out a small bit of information, using it to represent the whole thing.	**Analogic:** Seeing likenesses between things; understanding metaphoric relationships.
Temporal: Keeping track of time, sequencing one thing after another: Doing first things first, second things second, etc.	**Nontemporal:** Without a sense of time.
Rational: Drawing conclusions based on reason and facts.	**Nonrational:** Not requiring a basis of reason or facts; willingness to suspend judgment.
Digital: Using numbers as in counting.	**Spatial:** Seeing where things are in relation to other things, and how parts go together to form a whole.
Logical: Drawing conclusions based on logic: one thing following another in logical order — for example, a mathematical theorem or a well-stated argument.	**Intuitive:** Making leaps of insight, often based on incomplete patterns, hunches, feelings or visual images.
Linear: Thinking in terms of linked ideas, one thought directly following another, often leading to a convergent conclusion.	**Holistic:** Seeing whole things all at once; perceiving the overall patterns and structures, often leading to divergent conclusions.

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YOUR STYLE OF LEARNING AND THINKING

DIRECTIONS: Students think and learn about things in many different ways. Each question below talks about different ways that students think about and learn things. Of the two choices, pick the one that best tells how you think and learn about things, using your left brain or right brain.

1. (a) I remember faces more easily than names.
   (b) I remember names more easily than faces.

2. (a) I answer best to directions which are told to me or written out.
   (b) I answer best to directions when I have someone to show me how.

3. (a) I like to let people know how I feel.
   (b) I keep my feelings to myself.

4. (a) I prefer to do things one at a time.
   (b) I prefer to do more than one thing at a time.

5. (a) I prefer tests where the answers are given to me and I am asked to pick out the best one.
   (b) I prefer tests where I write the answers out myself.

6. (a) I can tell when a person is happy or not without the person telling me.
   (b) People have to tell me when they are happy or sad.

7. (a) I am good at thinking up funny things to say and do.
   (b) I am not good at thinking up funny things to say and do.

8. (a) I prefer teachers who show me how to do things.
   (b) I prefer teachers who tell me how to do things.

9. (a) I like to know everything about a question before I answer it.
   I answer questions according to the way I feel.

10. (a) I like to have fun when I try to figure things out.
    (b) I like to have quiet when I try to figure things out.

11. (a) I like to make up my own games when I play.
    (b) I always like to play by the rules with no changes.

12. (a) I am willing most of the time to use anything around to get things done.
    (b) I like to use the right tool for the right job.

13. (a) I like teachers who tell me what to learn and how to learn it.
    (b) I do not like teachers who tell me what to learn and how to learn it.

14. (a) I usually come up with new things and ideas.
    (b) I rarely come up with new things and ideas.

15. (a) I usually seem to know what other people are thinking.
    (b) I rarely seem to know what other people are thinking.

16. (a) I often use examples when I talk.
(b) I hardly use any examples when I talk.

17. (a) I often get my ideas from examples.
(b) I hardly get any ideas from examples.

18. (a) I prefer to work on one problem at a time.
(b) I prefer to work on many problems at the same time.

19. (a) I prefer to learn facts like names and dates.
(b) I prefer to learn about what people think might happen someday.

20. (a) The way I answer a problem usually depends on the way I feel inside.
(b) I answer the problem by carefully picking the best answer.

21. (a) I like to picture the answer to a problem in my head.
(b) I do not like to picture the answer to a problem in my head.

22. (a) I prefer to answer a question by carefully picking the best answer.
(b) I prefer to answer questions by guessing.

23. (a) I can explain myself better by talking without moving my hands.
(b) I can explain myself better by moving my hands while I talk.

24. (a) I learn best when the teacher explains the lesson to me in words.
(b) I learn better when the teacher shows me a picture of what he/she wants me to do.

25. (a) I prefer to figure out all the steps in the answer to a problem.
(b) I prefer to write out everything about the answer to a problem.

26. (a) I prefer to tell a story by talking or writing it down.
(b) I prefer to tell a story by drawing or acting or giving a puppet show.

27. (a) I get lost very easily.
(b) I can find my way around even in strange places.

28. (a) I prefer to do things.
(b) I prefer to explain things.

29. (a) In school, I prefer drawing to reading.
(b) In school, I prefer reading to drawing.

30. (a) I find it easy to read maps.
(b) I find it hard to read maps.

SOURCE

Keenan and Smith

YOUR STYLE OF LEARNING AND THINKING

ANSWER SHEET

1.	**(a) R** **(b) L**	**16.**	**(a) R** **(b) L**
2.	(a) L (b) R	17.	(a) R (b) L
3.	**(a) R** **(b) L**	**18.**	**(a) L** **(b) R**
4.	(a) L (b) R	19.	(a) L (b) R
5.	**(a) L** **(b) R**	**20.**	**(a) R** **(b) L**
6.	(a) R (b) L	21.	(a) R (b) L
7.	**(a) R** **(b) L**	**22.**	**(a) L** **(b) R**
8.	(a) R (b) L	23.	(a) L (b) R
9.	**(a) L** **(b) R**	**24.**	**(a) L** **(b) R**
10.	(a) R (b) L	25.	(a) L (b) R
11.	**(a) R** **(b) L**	**26.**	**(a) L** **(b) R**
12.	(a) R (b) L	27.	(a) L (b) R
13.	**(a) L** **(b) R**	**28.**	**(a) R** **(b) L**
14.	(a) R (b) L	29.	(a) R (b) L
15.	**(a) R** **(b) L**	**30.**	**(a) R** **(b) L**

VI EQUITY AND THE SCIENCES

Activity — 20 minutes

With a partner or a small group of three or four persons, review the handout "Advising Students on Course Selection" *(pg.62)*. Jot down responses you would make to the student statements if they were discussing the merits of taking courses in mathematics.

GENDER EQUITY IN MATHEMATICS, SCIENCE AND TECHNOLOGY EDUCATION — 25 minutes

The under-enrollment of girls and women in mathematics and science classes has been well documented in the research literature along with attitude survey results that show low preference among girls and women, in general, for these subjects. Consequently, in the work force, where our country's need for well-trained scientists is of paramount importance, the numbers of women professionals are low. The National Research Council, in its report of conference proceedings, "WOMEN: Their Under-representation and Career Differentials in Science and Engineering" (1987), noted that "Women need to take math and science courses throughout their public school experience if they are to have any hope of entering and progressing in these fields later on... They need to be encouraged by their teachers (and others) if they are to gain self-confidence which appears for many to be lacking."

Some of the comments about mathematics, science, engineering and gender:

- According to U.S. Department of Education data in 1991, women earned 52% of all bachelor's degrees awarded by colleges and universities but only 31% of the bachelor's degrees in physical science and 14% in engineering.
- "What the different experiences of women in the physical and life sciences tell us is that multiple forces are at work to retard the rate at which women enter the scientific work force... (but) a common thread is the role that culture plays in determining career choices for women."

"The culture issues begin with the low expectations that our education system sets on the performance of females in science, especially in physics and math. This notion that culture biases are at the basis of the problem is

for Notes

sobering as cultures are difficult to change." Shirley M. Tilghman as quoted in the NEW YORK TIMES, January 25, 1993

- "Even girls who are highly competent in math and science are much less likely to pursue scientific or technological careers than are their male counterparts." AAUW Report "How Schools Shortchange Girls," Executive Summary, 1992

Myra and David Sadker, researchers in gender equity, observe that "In the early grades, girls are equal to or even ahead of boys on almost every standardized test. By the time they leave high school or college, they have fallen behind. By high school, girls score lower on the SAT and ACT exams, crucial for college admission. The gender gap is greatest in math and science." (USA Weekend, 1994) The researchers pose the question: "What other group starts out ahead in reading, writing, even in math, and twelve years later finds itself behind? Girls actually lose ground as a result of schooling." In their new book FAILING AT FAIRNESS (1994), the Sadkers comment on educators' tendency to "kill with kindness" when girls make course selections. They comment:

> Sometimes it is counselors who harm when they mean to help. Feeling sorry for girls who find their math and science courses difficult, they literally excuse them, a dismissal less likely to be offered to male students.

The treatment accorded girls and women is often unintentionally biased. The Sadker research shows that unintentional sexism, practiced daily at all levels of schooling in the United States by both female and male teachers, results in classrooms with the following characteristics:

- "Boys receive more praise, cues, criticism, encouragement, eye contact, questions, and attention than do their female classmates."
- "Boys get more detailed help and assistance from teachers than do the girls. Teachers tend to do the work for the girls."
- "Boys call for and get more attention from elementary and secondary teachers. Reinforcement is given to more assertive and aggressive behavior of male students by teachers who accept their responses even though they were given out of turn. Girls are told by these same teachers to raise their hands and wait their turn." (Sadker and Sadker, 1986)

These patterns of discrimination and bias continue into college and university classrooms.

- "Female students are interrupted more often by their professors. They are asked fewer questions, are coached less and given less time to respond to than are males."
- "Female students in college get more 'ok' acceptance from teachers rather than praise, criticism, or remediation."

- "Professors make more eye contact with male students and ask them higher-level questions while females are asked lower-order questions." (Funk, 1994)

What is to be done to encourage interests of girls and women in mathematics, science, technology, engineering studies — all of which offer promising future careers? Foremost is the need to create in schools and colleges a classroom climate that provides girls and women with the same learning opportunities as those of boys and men. Some suggestions to encourage girls in math are included in resources at the end of this unit.

How does the classroom climate convey equality of learning opportunities?

- First, school staffing reflects female role models in math, science, technology, engineering.
- All students and especially girls and women are genuinely welcomed by teachers and classmates.
- The work of all students is praised when it deserves to be praised.
- Girls and women are not patronized or treated as "necessary evils" in mathematics and science classes.
- Girls and women have equal access to the use of computers and advanced instruction.
- Girls and women have equal opportunities for laboratory or field assignments.
- Girls and women have teacher time equal to that provided for males.
- Cooperative learning groups are formed and integrated by gender with active involvement of each person carefully monitored so that girls contribute as much as their male counterparts.
- All students, and especially boys, are taught LISTENING skills and the good manners not to interrupt.

Teachers have rich resources to improve their science and mathematics programs in publications such as SCIENCE FOR ALL STUDENTS AND MATHEMATICS FOR ALL STUDENTS. The suggestions contained in these publications can be readily adapted to gender equity concerns.

Two examples of strategies to stimulate interests of girls and women are included at the end of this unit *(pgs. 64-65)*. They are adaptations from the SCIENCE FOR ALL STUDENTS publication.

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DISCUSSION QUESTIONS 20-30 minutes

Discussion of this critical topic can be continued by introducing one or all of the suggested questions.

- What do local data show about the enrollment of girls and women in mathematics, science, technology classes? Are girls and women enrolling in classes where they will receive training for entry level occupations? technical occupations? professional occupations?
- How many role models are present on the teaching staff in the areas of mathematics, science, technology and engineering? How many role models can be identified from among your school's graduates? Have these role models been invited to participate in motivational activities for current students?
- How would you describe the "culture of the institution" as it applies to selection of courses and programs of study by boys and girls, men and women? What factors seem to make a difference in choices of subjects or programs of study?
- As you think about your own classrooms, can you name specific efforts you have made to create a welcoming climate for girls as well as boys, women as well as men? Have you ever asked a colleague to monitor your class to identify your interactions with female and male students? Would you feel threatened to do this?
- What do you think about the list of classroom characteristics attributed to the Sadker research? Is there anything that particularly surprises you? Do you disagree with any of the items? Do these results apply to your classes? Do they apply to classes of your colleagues?

Activity 30-45 minutes

With a partner and at least one observer, role play the give-and-take situations suggested in "Advising Students on Course Selection" *(pg. 62)*. Analyze the dynamics of the interactions.

Activity 30-45 minutes

Invite a panel of administrators to participate in a discussion of the topic "What Administrators Can Do to Encourage Girls in Math" *(pg. 63)*. Are the suggestions feasible? What additional suggestions can be added to the list?

REFERENCES

AAUW. SHORTCHANGING GIRLS, SHORTCHANGING AMERICA. Executive Summary: American Association of University Women, 1991.

Funk, Carole. "What Do Women Students Want (and Need)?" Paper presented at the AAUW Symposium on Gender Issues, Minneapolis, 1993.

Mann, Judy. "Bringing Girls to the Front of the Class," WASHINGTON POST, September 30, 1994.

Sadker, Myra and Sadker, David. FAILING AT FAIRNESS: How America's Schools Cheat Girls." Charles Scribner's Sons, 1994.

Sadker, Myra and Sadker, David. "Sexism in the Classroom: From Grade School to Graduate School." PHI DELTA KAPPAN, March 1986.

Sadker, Myra and Sadker, David. "You're Smart. You Can Do It." USA WEEKEND, February 4-6, 1994.

SCIENCE FOR ALL STUDENTS: The Florida Pre K-12 Science Curriculum Framework. Florida Department of Education, 1993.

Tilghman, Shirley M. "Science vs. the Female Scientist," NEW YORK TIMES, January 25, 1993.

Advising Students on Course Selection

Student Says	You Say
But I don't like math.	
But I don't do well in math.	
It'll hurt my gradepoint average.	
I don't like the teacher.	
I'm not going to need it anyway.	
It's boring.	
My mother/sister/father/brother/friend didn't need math.	
I feel dumb in math class.	
I don't want to be a nuclear physicist or anything like that.	
I'm going to get married and have babies.	

Adapted from: "Title IX Line," Center for Sex Equity in Schools, University of Michigan.

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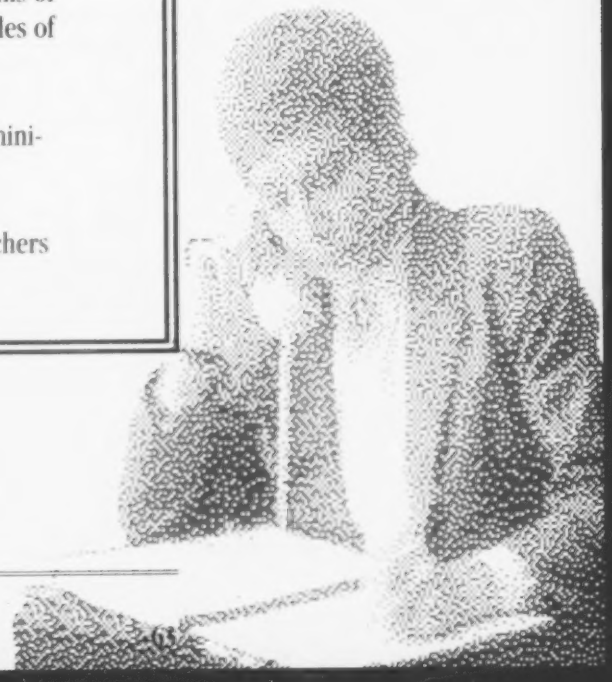
What Administrators Can Do to Encourage Girls in Math

Research in effective schools points most decidedly to the principal's crucial role in promoting student achievement. The principal, department chair, or curriculum coordinator who leads a gender equity effort in mathematics will:

- Have a basic understanding of the instructional strategies that encourage girls in mathematics.
- Promote awareness in a secondary school by gathering and disseminating enrollment information, and standardized test score item analyses by problem type and gender.
- Make time and resources available for awareness-building activities for teachers, counselors, parents and students.
- Support staff development in math equity to help promote equitable teaching strategies and curriculum.
- Allocate budget for manipulatives and other problem solving educational materials.
- Support staff development for other subject teachers who suffer from math avoidance, to help them promote math related activities and positive attitudes in their classrooms.
- Ensure that award criteria, club strategies and other forms of mathematics recognition are consistent with the principles of an equitable climate.
- Include equitable teaching strategies in teacher and administrator evaluation and accountability.
- Support the formation of networks for students and teachers to help encourage girls in math and science.



SOURCE

"Title IX Line" Center for Sex Equity in Schools, University of Michigan.

*From **SCIENCE FOR ALL STUDENTS**, Florida Department of Education, 1993.*
(Comments in bold added by editor.)

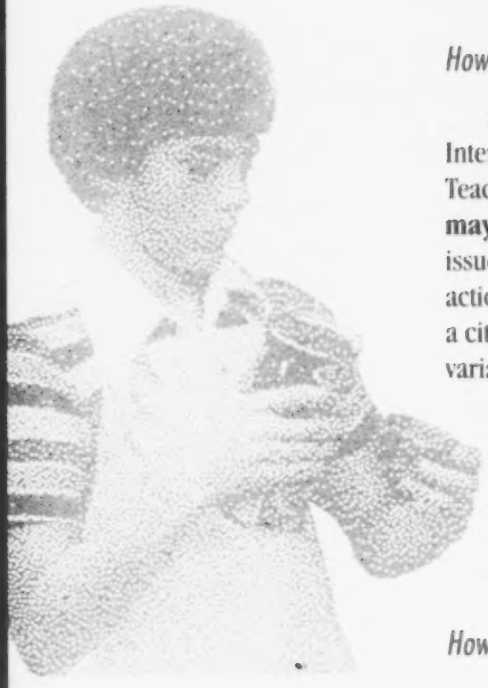
ROLE PLAYING AND SIMULATION

What is it?

Role playing allows students to assume the identity of another person. Role playing helps students understand another person's point of view and concerns. Simulations use role playing to involve students in situations that require a group of people with two or more points of view to formulate a common decision. **(Ask boys and girls to assume the role of the opposite gender.)**

What does it do?

Role playing and simulations help students appreciate the importance of values in decision making. These strategies are especially useful in integrating science, technology, and society (STS) issues into the curriculum.



How do you do it?

Simulations are available in books, journals, and educational software. Interactive video discs can provide settings and background information. Teachers can design their own simulations around local issues. **(Gender equity may be one such issue.)** Generally, students read background material on the issue, are assigned roles with descriptions, meet to discuss possible courses of action, and present their data and viewpoints to a decision-making panel (e.g., a city council, review board, etc.). Decisions are made and analyzed by some variation of the following steps:

- gather relevant data from several persons and groups represented by the roles;
- conduct risk/benefit analyses of alternative plans of action;
- make a decision;
- analyze the decision and associated values.

How do you know if it works?

Indicators of success include the quality of data researched, method of presentation, rationale for decision making, group and individual participation, and transfer of process to a new simulated activity. Affective indicators are increased tolerance and willingness to appreciate others' diverse points of view. **(Special attention can be noted in the attention given by boys to feelings or thoughts expressed by girls.)**

From ***SCIENCE FOR ALL STUDENTS****. Florida Department of Education. 1993.*
(Comments in bold added by editor.)

LITERATURE, HISTORY, AND STORYTELLING

What is it?

Many autobiographies and biographies of scientists connect science to the social context of those times. History comes alive through the eyes of a scientist. For example, the words of conservationist John Muir and biologist Rachel Carson convey the passion they felt about the land and water. **Barbara McClintock (physiologist), Sally Ride (astronaut), Maya Lin (architect), Dian Fossey (conservationist) are examples for further study.**

What does it do?

The writings of past and current scientists personalize science learning. Students are able to link science and literature, science and history, and science and society. Interest in science careers is increased. **(Encourage both boys and girls to read about females who have made significant contributions to mathematics, science or educational technology.)**

How do you do it?

Ask the media specialist to help locate books, brochures, and tapes relevant to science **(specifically suggest a display of scientists who are women).** Museums, zoos, botanical gardens, parks, and bookstores are excellent sources of information. Assign students to prepare reports on the "life and times" of scientists during specific periods of history such as the Civil War or between 1910 and 1990.

How do you know if it works?

By asking students to write about their own observations and insights after lessons crafted around the writings of others, teachers can look for increases in attention to details in description and connections to students' own lives. **(Students might be asked to describe the process they followed in identifying female role models.)** Student interest can also be judged by the kinds of questions that they ask.

for Notes

CHANGING WORKFORCE DEMOGRAPHICS

Activity — 15 minutes

Complete the "Self-Assessment of Workforce Demographics" *(pg. 69)*. Set aside for use later in the unit.

THE NEW WORLD OF WORK — 30-60 minutes

The world of work in the years just ahead will see a continuation of the trend that has become apparent in the last two decades: increasing numbers of women entering the workforce with the intention of contributing financially to their own and their family's economic welfare. Millions of women who are today's high school and college students will become lifetime workers. It is a fact that feminization of both the workforce and the workplace will be a reality. By the year 2000, it is estimated that 47 percent of the workforce will be women and 61 percent of all women will be working in paid employment. Women who work full time are paid an average of 70 cents for every dollar paid to men.

With the ever-increasing presence of work in the lives of women and the ever-increasing presence of women in the workforce of the United States, it is incumbent upon today's schools and colleges to re-examine programs and services to ensure that all persons are prepared to enter the workforce and are able to advance in meaningful careers. Particular attention needs to be given to those who have been treated inequitably to help them acquire skills for upward mobility in tomorrow's labor market. Education's somewhat ambiguous and amorphous goal of "preparing students for life" must be transformed into very practical goals, one of which is surely to prepare ALL students with the knowledge and skills necessary to enter and advance in paid employment.

"Career preparation" needs to be a major consideration in the provision of counseling and guidance services made available to both young women and young men. It is certainly out of date to suppose that only boys need to be prepared to earn a living and that girls' primary life roles will be homemakers.

Entry into the world of work may be a bumpy road for the next generation of workers, particularly for those who drop out of school or who do not take advantage of career training programs. The world of work in 2000 and beyond may be

far different from the one that is familiar to us today. Counselors and all educators must keep themselves alert to events that affect job availability for their students and to the implications for young people who are now preparing for work.

Two factors need to be communicated to today's students. The first: "down-sizing" in business and industry may drastically limit the number of entry occupations available and the opportunities for advancement for both women and men. The second: futurists suggest that temporary employees ("temps") will account for as many as 50 percent of the paid work force by the year 2000. Clearly, finding one's place in the workforce will require an ability to market oneself to others in addition to the personal process of matching one's interests and skills with available jobs.

In her study "New Economic Trends for Women's Employment: Implications for Girls' Vocational Education," Lynn C. Burbridge (1992) notes that:

> Bureau of Labor Statistics projections appear to support the view that low-paying jobs may be adding more jobs than high paying ones. (DOL) Service occupations will add more jobs than any other major occupation; three-fourths of this growth will be among food preparation and service, health service, and cleaning and building service occupations. These are traditionally low-paying occupations. Administrative support occupations are expected to grow more slowly. Thus, the least well paying of the female-intensive fields will exhibit the greatest growth, suggesting limited opportunities for low-income and minority women to find upward mobility.

The importance of advisement on career opportunities that are nontraditional for girls and women cannot be stressed too much.

What strategies can be used to help prepare girls and women for the modern workforce?

- Females need to know about the advantages of occupations that are nontraditional for them.
- Females should have career experiences such as job shadowing for nontraditional occupations as well as access to apprenticeships.
- Females need to have opportunities to explore occupations that are typically nontraditional for them.
- Females need access to successful role models who can share experiences and practical advice on job entry.
- Females need to know that they must plan to be economically self-sufficient.
- Females need up-to-date career information that bears on decision making and courses of study they select while in school.
- Females need to be aware of their rights and how to deal with discriminatory acts.

DISCUSSION QUESTIONS 40 minutes

The following questions may stimulate discussion and focus further discussion on implications of the changing demographics for the work of teachers and counselors.

- Referring to your notes, what facts about the changing work force are most important to call to the attention of females? Males?
- What businesses/industries in your community employ the most workers, and in what occupations are most of those workers employed?
- What are some of the things you can do as a professional educator to help students improve their work readiness?
- To what extent are "down-sizing" and the use of "temps" evident in your community?
- When considering the place of work in their lives, what difficulties do women and men face today that you did not face as a young person? What accounts for these difficulties? What suggestions would you make to help today's young people cope with job-entry problems?

Activity 30 minutes

Refer to "The Wage Gap" *(pg. 70)*. Average salaries of all workers in selected occupations are given, as reported in the annual national survey conducted by WORKING WOMAN. Make notes on anything from the data that surprises you.

- Notice the salary discrepancies between men and women in fields that require math skills: auditors, accountants, financial managers, insurance sales people.

  Why would women in these fields command such low salaries when compared with men?

- Notice the average salary for females in the catagory "registered nurse." Does it surprise you that the average salaries for females barely exceed those of males? How do these national average salaries compare with salaries in your community? Do the same discrepancies exist? Does the salary gap NARROW for women who enter careers that are nontraditional for their gender? What other observations about the data would you like to make? What other salary data would you like to ADD to the table?
- What are specific implications of the salary data for your area?

Refer to your responses to "Self-Assessment of Workforce Demographics." Compare your responses to facts you have learned in this unit.

REFERENCE

Burbridge, Lynn C. (1992). "New Economic Trends for Women's Employment: Implications for Girls' Vocational Education." Wellesley, MA: Center for Research on Women.

Self-Assessment for Workforce Demographics

Write your responses to each of the following:

1. During the last two decades, have the numbers of women in the workforce (a) increased, (b) decreased, (c) stayed the same? Explain your answer.

2. What do you think will be some of the major changes in the workplace of the next century?

3. In general is there still a wage gap between the salaries that men and women earn? If your answer is yes, what is the nature of that gap?

4. What career fields do you think have the largest wage gap between men and women?

5. In a traditional female field such as registered nursing, do you think there is a wage gap between the salaries of women and men? Why?

6. Do you think that boys should consider nontraditional careers? Should girls consider nontraditional careers? If so, give examples for each.

7. How have your expectations of the career potential of girls and women changed over the years? Of boys and men?

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A LIST OF AVERAGE SALARIES IN THE WAGE GAP:

Samples

(Based on a national sample of jobs in 30 career fields)	Women	Men	% Men's Salaries Exceed Females' *(rounded)*
Auditors, Accountants	$28,288	$36,920	31%
College Full Professors, public	54,270	60,760	12%
College Instructors, public	28,070	29,770	6%
Computer Operators	21,216	26,520	25%
Engineers, all ages	48,555	59,750	23%
Federal Economists	51,019	60,616	19%
Financial Managers	32,864	50,180	53%
Insurance Salespeople	26,000	32,656	26%
Lawyers	52,780	63,024	19%
Medicine			
Family Practitioners	106,680	122,703	15%
General Surgeons	172,552	196,850	14%
Ob/gyn	183,110	211,474	15%
Magazine Editors			
10+ years	51,521	57,808	12%
4-10 years	34,856	40,405	16%
Registered Nurses	35,776	35,256	–1%
Real Estate Sales	30,056	37,648	25%
Teachers			
Secondary	31,200	34,580	11%
Elementary	30,472	34,632	14%
Counselor	31,148	37,804	21%

SOURCE

16th Annual Salary Survey, WORKING WOMAN, January, 1995.

VIII COUNSELING FOR 21ST CENTURY CAREERS

for Notes

Activity 30 minutes

Refer to the "Occupational Stereotypes Checklist." *(page 76)*. Go through the list and mark an "F" for those occupations that you consider to be traditionally "female," an "M" by those you consider to be traditionally "male" occupations, an "E" by those you consider to be traditional for either males or females.

Are there significant differences, based on gender, in the mean salaries for each occupation? What are some of those differences? How do the Es fare in terms of mean salaries?

EQUAL ACCESS AND EQUAL PAY 60-120 minutes

During the last 25 years, considerable public attention has been drawn to the status of girls and women in the nation's workforce. "Equal access to all careers" and "equal pay for equal work" have been dominant themes and continue to be as we approach the 21st century. In the past girls and women were conditioned to think of work as a part-time interlude in their lives. If that was ever true, it is no more. Most women today will work at least 35 years, and in many cases they will be the chief source of earned income for themselves and their families. Women are still paid, on average, 70 cents for every dollar paid to men.

An examination of data for the State of Florida indicates that **52.8% of women 16 years and older were in the labor force in 1990**. Of women with children who were working, 63.2% had children under 6 and 77% had children between 6-17. Women comprised 46.7% of the Florida civilian workforce. (FLORIDA STATISTICAL ABSTRACTS, 1994)

Sometimes these facts are not of high interest to adolescents while they remain in a protected environment and, for the most part, rely on others for their financial support. Teachers and counselors, however, play a crucial role when they aggressively expose students to information about the world of work; when they adopt motivational strategies (role models, mentors, seminar speakers, etc.) to communicate to students the sense of independence that evolves from financial

for Notes

The Median Income for Families in the United States in 1992 Was as Follows:

Married couple — families *(without regard to labor force participation)*	$42,054
Wife in paid labor force	49,984
Wife NOT in labor force	30,320
Male householder, no spouse	27,821
Female householder, no spouse	17,221

In Terms of Race and Ethnicity, Median Income of Year-Round Full-Time Workers for 1992 Was as Follows:

Females	
Hispanic	$17,743
Black	20,299
White	22,423
Males	
Hispanic	$20,312
Black	22,942
White	31,737

SOURCE: United States STATISTICAL ABSTRACTS, 1993. "Median" refers to the middle value of a group of wages. It is the middle point when wages are listed in ascending order.

self-sufficiency; and when they point out the relationship of these factors to the coursework choices students make in schools and colleges. Girls and young women, particularly, will benefit from counseling that communicates the importance of self-reliance and their need to be financially self-sufficient. Giving students a simple list of salary comparisons can get their attention!

Counselors or teachers acting in the role of counselor have a better opportunity than any other educators in schools and colleges to demolish three of the barriers that have limited accessibility of women and girls to nontraditional training and careers. These are

- providing as much up-to-date information as possible about nontraditional career options
- opening access to on-the-job training, part-time work or other experiences that expand exposure to nontraditional occupations
- encouraging students to enroll in classes that open up (and do not close off) future career possibilities in the 21st century.

DISCUSSION QUESTIONS

What types of occupational information are currently routinely made available to students? How is the student usage of occupational information monitored? What are some of the sources of information that can update educators' information about on-the-job training, part-time work, apprenticeships? What are ten of the most promising high wage, high interest careers students should consider as we approach the beginning of the 21st century? Which of these are nontraditional for women? As we answer these questions, what do we need to do to add currency to our counseling and guidance programs?

for Notes

Nationally, there will be changes in the demand for workers during the next decade. Typical data are given below:

OCCUPATIONS THAT WILL GROW AND DECLINE 1990-2005

National Statistics

Occupations That Will Grow		Occupations That Will Decline	
Computer Analysts and Computer Scientists	78.9%	Directory Assistance Operators	59.4%
Computer Programmers	56.1%	Telephone Repairers	55.0%
Child Care Workers	48.8%	Precision Assemblers of Electronic Equipment	47.5%
Receptionists and Information Clerks	46.9%	Private Household Child Care Workers	39.5%
Registered Nurses	44.4%	Telephone, Cable TV Line Installers	30.4%
Nursing Aides, Orderlies, Attendants	43.4%	Machine Tool Cutting Operators	28.6%
Restaurant Cooks	41.8%	Meter Readers	24.8%
Lawyers	35.1%	Household Help	24.5%
Accountants and Auditors	34.5%	Switchboard Operators	23.2%
Guards	33.7%	Farmers	20.9%

SOURCE: Bureau of Labor Statistics, December, 1993, reported in "Building Fairness: Expanding Career Options in Illinois"

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for Notes

Florida, like the rest of the nation, will encounter broad changes in the workforce of the 21st century. The accompanying resource "Florida Industry and Occupational Employment Projections, 1991–2005" identifies areas of growth and stagnation. Counselors can provide the best direction and advice when they themselves are informed about the job market students are likely to encounter.

DISCUSSION QUESTIONS – TABLE A page 77

Refer to the 1993 Florida Occupational Wage Survey or a more recent survey as it becomes available. Which of the occupations on Table A (highest paying hourly wages) require knowledge of the following:

Mathematics?

Science?

Technology?

What generalizations can you make about **the relationship of mathematics, science, and technology to high wage jobs in Florida?**

What generalizations can you make about **high wage salaries in careers that are nontraditional for women** versus careers that are traditional?

DISCUSSION QUESTIONS – TABLE B page 78

What generalizations can you make about the relationship between **amount of education required** to perform jobs and the **mean salaries for these Florida jobs?**

What generalizations can you make about the relationship between technical skill requirements and mean salaries?

What generalizations can you make about the occupational classifications of the most numerous jobs in Florida, as depicted in Table B?

DISCUSSION QUESTIONS – TABLE C pages 79-83

Referring to the handout Table C – **"Top 100 Occupations in Florida Ranked by Total Growth,"** examine the list and enumerate any generalizations that can be made.

How many of the jobs fall in the service category?

How many of the jobs that are traditionally "women's jobs" are typically low paying?

Which careers do you think offer the best financial potential?

Which require highest level of education and training?

DISCUSSION QUESTIONS

How many participants are on the mailing list for the Florida Department of Labor and Employment Security? How many maintain regular contact with Job Service of Florida? Of the "Top 100 Occupations in Florida Ranked by Total Growth" listed in the handout, how many are related to local businesses and industries? How many of the local occupations can be called "high wage"? Do local schools and colleges prepare workers for any of the 100 occupations? Are there occupations that will be in demand in the local area that are not included in the "Top 100" list?

Activity

Using information available from the Florida Department of Labor and Employment Security, complete Table C – **"Top 100"** handout **for the local or regional area.** You may want to divide tasks in order to complete the study. When the information has been collected, validated and recorded, copies of the completed study can be distributed to every school and college counseling office for use with students.

How can this information be incorporated into your local school improvement plans? Talk with members of your school advisory committee to identify ways these data can be used as vital resources for parents and educators.

for Notes

REFERENCES

"Building Fairness," Illinois State Regional Office of Education, Rantoul, Illinois, Spring, 1994.

"Florida Industry and Occupational Employment Projections 1991–2001," Florida Department of Labor and Employment Security, November, 1993.

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Bureau of Labor Market Information
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2012 Capital Circle Southeast
Tallahassee, Florida 32399–2151
(904)488–1048

OCCUPATIONAL STEREOTYPES CHECKLIST

Examine this list of occupations. In the box on the left, check an "F" for occupations you consider to be traditional female occupations, an "M" for those you consider to be male occupations, and "E" for either.

F	M	E		Mean
☐	☐	☐	A/C, Heating and Refrigeration Mechanic	$11.45
☐	☐	☐	Accounting Clerk	8.50
☐	☐	☐	Administrative Assistant	11.12
☐	☐	☐	Auditor	16.37
☐	☐	☐	Automotive Mechanic	11.56
☐	☐	☐	Cashier	5.31
☐	☐	☐	Chef	10.89
☐	☐	☐	Child Care Worker	5.41
☐	☐	☐	Communications Equip Installer/Repairer	12.96
☐	☐	☐	Computer Operator	9.97
☐	☐	☐	Corrections Officer	12.26
☐	☐	☐	Clerk, Retail	6.67
☐	☐	☐	Crane Operator	11.26
☐	☐	☐	Data Processing Equipment Repairer	15.23
☐	☐	☐	Electrical/Electronics Assembler	7.42
☐	☐	☐	Electrical/Electronics Technician	13.76
☐	☐	☐	Emergency Medical Technician	8.09
☐	☐	☐	Engineering Technician	12.86
☐	☐	☐	File Clerk	7.31
☐	☐	☐	Firefighter	11.08
☐	☐	☐	General Office Clerk	9.40
☐	☐	☐	Land Surveyor	14.42
☐	☐	☐	Law Enforcement Officer	14.56
☐	☐	☐	Licensed Practical Nurse	10.55
☐	☐	☐	Registered Nurse	15.73
☐	☐	☐	Retail Salesperson	6.05
☐	☐	☐	Secretary	9.48
☐	☐	☐	Teacher Aide — Paraprofessional	7.67
☐	☐	☐	Teller	6.82
☐	☐	☐	Truck Driver — heavy	9.01

TABLE A

1993 FLORIDA OCCUPATIONAL WAGE SURVEY

Based on a Statewide Survey of 177 Occupations

Florida Department of Labor and Employment Security
Division of Labor Employment Training
Bureau of Labor Management Information

20 OCCUPATIONS PAYING HIGHEST HOURLY WAGES — State-wide

	Mean
Engineer — Math and Natural Science Manager	$25.87
Pharmacist	24.35
Financial Manager	23.52
Computer Engineer	21.70
Electrical/Electronics Engineer	21.11
Civil Engineer	20.91
Mechanical Engineer	20.38
Teacher — Secondary	20.29
Teacher — Elementary	19.93
Physical Therapist	19.85
Systems Analyst — EDP	19.83
Marketing Advertising Manager	19.77
Financial Analyst	19.74
Teacher/Instructor	19.39
Industrial Products Manager	19.34
Public Relations Manager	18.88
Administrative Services Manager	18.79
Industrial Engineer	17.97
Construction Manager	17.72
Computer Programmer	17.17

**Mean refers to the arithmetic average wage of all reported wages. Data reported are based an all employees in a given occupation at the time the survey was conducted.*

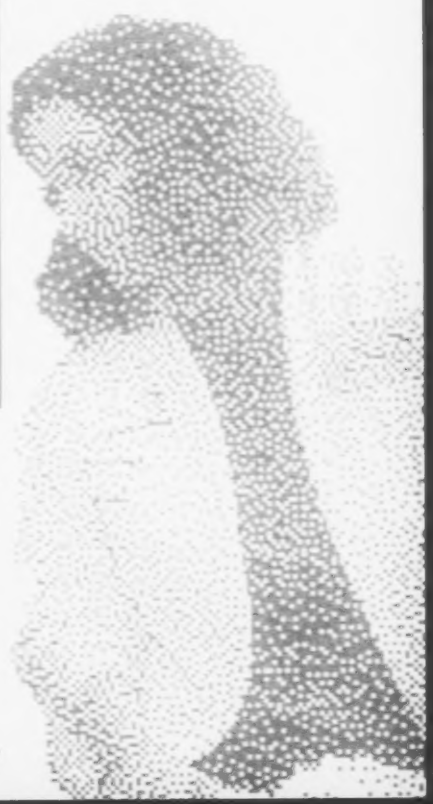

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TABLE B

1993 FLORIDA OCCUPATIONAL WAGE SURVEY

OCCUPATIONS EMPLOYING MORE THAN 8,000 WORKERS — State-wide

	Number	Mean
Teacher/Instructor	**31,051**	**$19.39**
Teacher — Secondary	16,829	20.29
Teacher — Elementary	**14,863**	**19.93**
Janitor/Cleaner	12,978	6.67
Fast Food Worker	**11,360**	**4.53**
Law Enforcement Officer	10,986	14.56
General Office Clerk	**10,232**	**8.23**
Secretary	9,923	9.48
Cashier	**9,579**	**5.31**
Bus/Van Driver	9,475	8.86
Retail Sales	**8,494**	**6.05**
Food Preparer	8,358	6.03
Waiter/Waitress	**8,352**	**2.90**

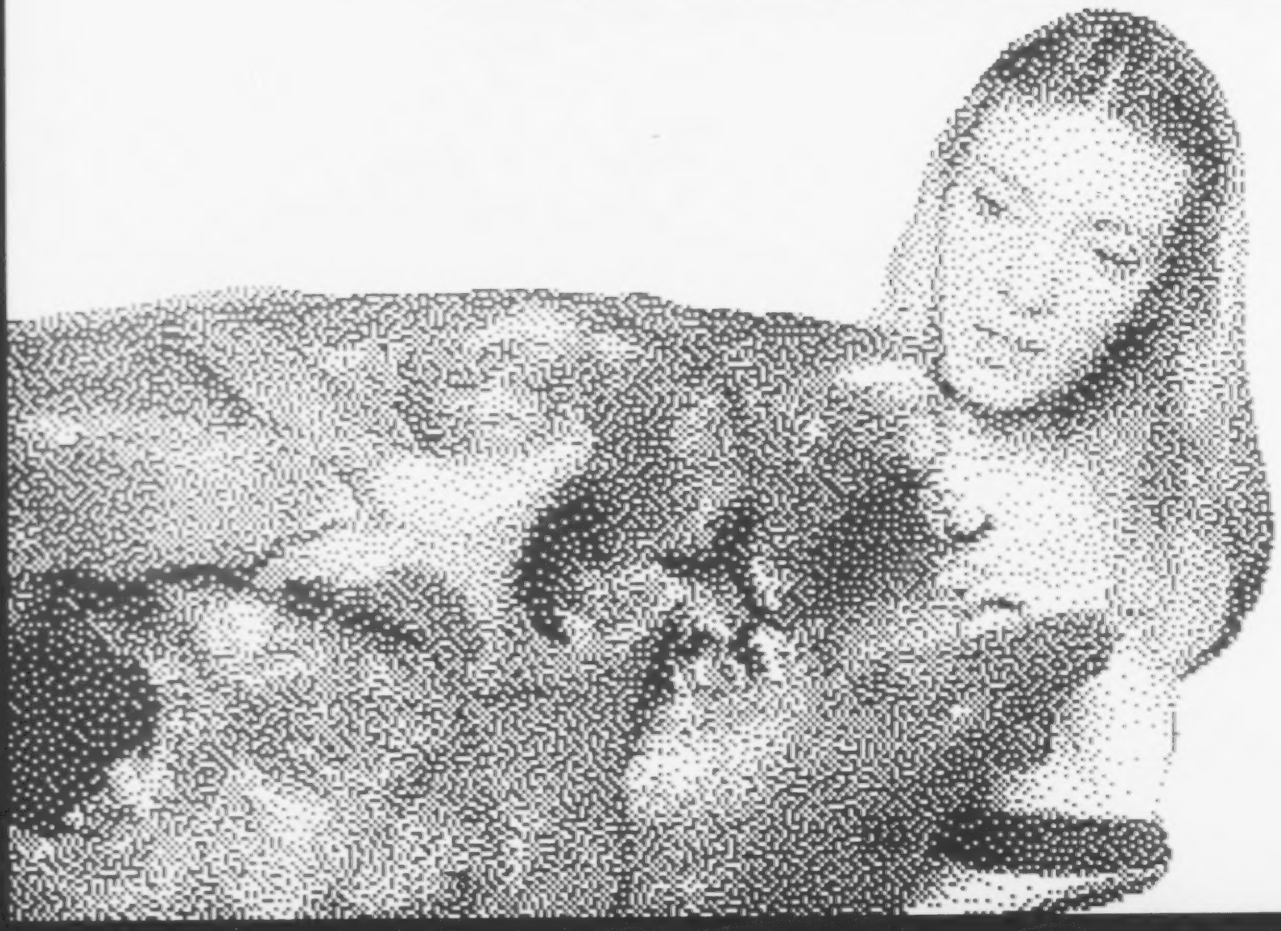

TABLE C

TOP 100 OCCUPATIONS IN FLORIDA

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
1. Salesperson, Retail					
2. Gen Mgr/Top Exec					
3. Cashier					
4. Gen Office Clerk					
5. Waiter, Waitress					
6. Registered Nurse					
7. Secretary, except legal and medical					
8. Food Preparer/ server — fast food					
9. First Line Supervisor, sales					
10. Child Care Worker					
11. Janitor and Cleaner					
12. Nursing Aide and Orderly					
13. Food Preparation Worker					
14. Receptionist, Information Clerk					
15. Maid, Household Cleaner					
16. Sales Rep, nonscientific products except retail					
17. Guard					
18. First Line Supervisor, clerical					
19. Stock Clerk, sales floor					
20. General Farm Worker					
21. Maintenance Repairer, General Utility					
22. Accountant, Auditor					
23. Bookkeeping, Accounting and Auditing Clerk					
24. Cook, Restaurant					
25. Licensed Practical Nurse					
26. Truck Driver, light					
27. Teacher, elementary					
28. Truck Driver, heavy					

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TABLE C

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
29. **Teacher, secondary**					
30. Food Service and Lodging Manager					
31. **Carpenter**					
32. Correction Officer, Jailer					
33. **Hairdresser, Cosmetologist**					
34. Gardener, Groundskeeper, except farm					
35. **Home Health Aide**					
36. Teacher, preschool and kindergarten					
37. **Physician**					
38. Lawyer					
39. **Automotive Mechanic**					
40. Shipping, Receiving and Traffic Clerk					
41. **Dining Room and Bartender Helper**					
42. Electrician					
43. **Systems Analyst**					
44. Computer Programmer					
45. **Painter and Paperhanger**					
46. Counter Attendant					
47. **Medical Secretary**					
48. Financial Manager					
49. **Marketing, PR & Advertising Manager**					
50. Stock Clerk, stockroom or warehouse					
51. **Legal Secretary**					
52. Artist, Commercial Artist					
53. **Electrical, Electronic Engineer**					
54. Counter, Rental Clerk					
55. **Police Patrol Officer**					
56. Cook, institution or cafeteria					
57. **Sales Rep, scientific except retail**					
58. Lawn Maintenance Worker					
59. **Travel Agent**					
60. Teacher's Aide, Educational Assistant					
61. **Adjustment Clerk**					

TABLE C

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
62. Electrical, Electronic Technician					
63. Taxi Driver, Chauffeur					
64. Plumber, Pipefitter, Steamfitter					
65. Head Packer and Packager					
66. Teacher's Aide, Paraprofessional					
67. Medical Assistant					
68. Bartender					
69. Cook, Short Order					
70. Data Entry except composing					
71. Teacher, special education					
72. Clergy					
73. Heating, A/C, Refrigeration Mechanic					
74. Cook, fast food					
75. Sales Worker, insurance					
76. Typist, including word processing					
77. Property, Real Estate Manager					
78. Industrial Truck and Tractor Operator					
79. Property, Real Estate Manager					
80. Salesperson, parts					
81. Personnel, Training Specialist					
82. Telemarketer, door-to-door, street sales					
83. Postal Mail Carrier					
84. Firefighter					
85. Vehicle, Equipment Cleaner					
86. Bank Teller					
87. Social Worker, except med/psychiatric					
88. Social Worker, medical or psychiatric					
89. Paralegal					
90. Bill, Cost and Rate Clerk					
91. Management Analyst					
92. Grader, Sorter, ag products					
93. Engineer, Math, Natl Science Manager					
94. Sales Agent, real estate					

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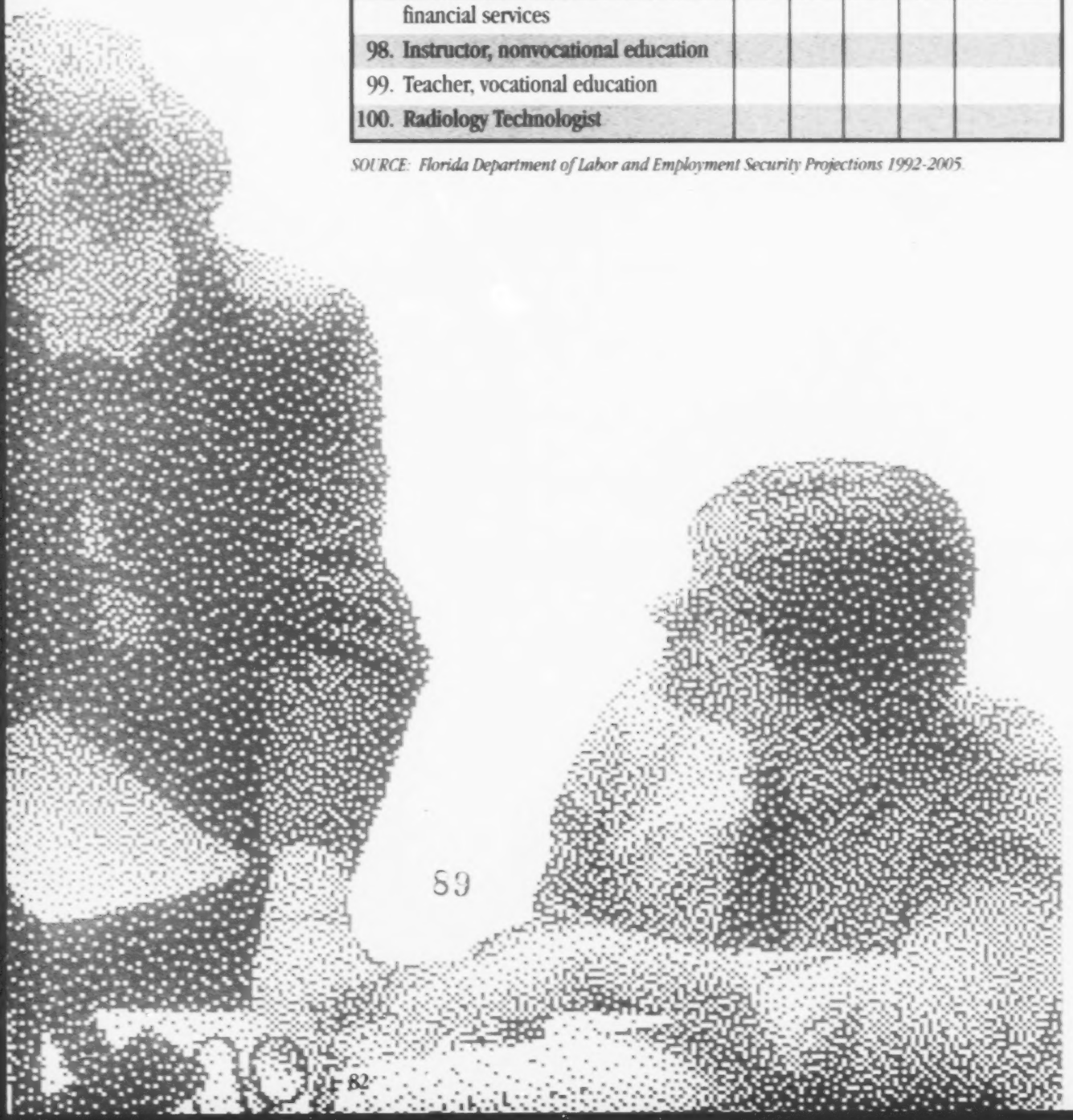
TABLE C

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
95. Administrative Services Manager					
96. Education Administrator					
97. Sales Agent, securities, financial services					
98. Instructor, nonvocational education					
99. Teacher, vocational education					
100. Radiology Technologist					

SOURCE: Florida Department of Labor and Employment Security Projections 1992-2005.



FLORIDA INDUSTRY AND OCCUPATIONAL EMPLOYMENT PROJECTIONS 1991–2005*

NOTES ON SELECTED INDUSTRY EMPLOYMENT PROJECTIONS IN FLORIDA*

- The rate of new job creation has been slowing since the 1970s and will continue to slow through the year 2005.
- The Services sector will continue to be the fastest expanding industry in the Florida labor market with business services "adding new jobs due to firms contracting out for temporary technical and labor services. The general aging of the Florida population will contribute to health services adding more jobs than any other service industry."
- Trade is Florida's second fastest growing major industry division. Within that category, eating and drinking places will expand fastest. Other trade sectors, with the exception of apparel stores, will grow more slowly than the average. The report notes that "Trade is overbuilt in Florida and fierce competition will continue to characterize the industry. Consumers will become more value–oriented, forcing retailers to compete with each other as well as with mail order firms."
- Products in the manufacturing sectors related to the defense industry are expected to decline with the decline in defense spending. However, the military is expected to continue to rely heavily on up–to–date navigation, target acquisition, and guidance hardware. Defense contractors are expected to continue to provide thousands of jobs in Florida but fewer than existed in the 1980s.
- In agriculture, most new jobs will be in agriculture services. Agricultural production jobs or jobs related to growing crops will decline.
- Most new jobs in mining will be in construction–related mining such as rock, sand and gravel.
- In the construction sector, most new jobs will be for special trades contractors (electrical, plumbing, roofing, air conditioning, etc.). The construction jobs in other sectors will be much smaller.

- Within transportation, communications and public utilities categories, travel agencies' and freight shippers' employment is expected to grow the fastest. Communications and air transportation employment will grow very slowly.

- In the government sector, local education will account for most of the local job expansion. State and federal job growth is expected to be slow.

- In finance, insurance and real estate, growth will be slower than the average for all industries. This industry sector will be driven by competition, mergers and consolidation.

Analysis of Projections

As Florida's industry structure continues to change, so will its occupational composition. The emphasis on education will continue. [Some of] the 100 fastest growing occupations will generally require the highest level of education and skill....These [100 fastest growing] occupations will make up more than half of the new jobs between the present and 2005.

In addition, many of the occupations projected to grow most rapidly during this period are among those with higher earnings.

Some occupations that require little or no training and have slower projected growth rates, such as sales clerks, cashiers, and general office clerks may generate large numbers of new jobs because of the need to replace workers who leave the labor force or who transfer to other occupations. (Editor's note: Salaries in these occupations generally are low wage and sometimes employment is part–time.)

Therefore, workers with all levels of education and training will continue to be in demand, but opportunities will be better for those with more education and training.

SOURCE:

Florida Department of Labor and Employment Security, Division of Labor, Employment and Training, Bureau of Labor Market Information, November, 1993.

for Notes

GENDER EQUITY FOR SCHOOL IMPROVEMENT

Activity 5 minutes

Refer to copies of the FSCA or ASCA Goals for Counselors. Read the activity at the end of the organizing theme in order to implement this two to three hour workshop.

GENDER EQUITY IN COUNSELING 60 minutes

Counselors in the State of Florida are vital resources for the achievement of Blueprint 2000 goals, Florida's master plan to achieve school improvement and accountability, and the national goals embodied in the document "Goals 2000: Educate America Act." The state and national professional associations for counselors are seizing the school improvement mandates as opportunities to restructure developmental counseling and guidance goals and strategies and as an opportunity to renew commitments to helping students develop to their fullest potential.

The Florida School Counselor Association and the American School Counselor Association have conscientiously attempted to define the role of counseling and guidance in schools in relation to state and national education school improvement goals. The FSCA speaks to ways in which developmental guidance programs facilitate the accomplishment of Florida's Blueprint 2000 education goals. Those goals and FSCA counseling descriptors are given below.

Following each goal statement, suggestions are given to infuse gender equity in counseling practices. After discussing each of the goals, complete the suggested activity.

GOAL 1: READINESS TO START SCHOOL

The Counselor works directly with parents and teachers to:

- Identify children who are developmentally disabled, disadvantaged, or with special needs, and coordinate assistance
- Help children develop social skills, positive self–concepts, and the motivation to learn
- Provide parenting workshops, seminars, and consultation

- Liaison school, HRS, and other community services
- Consult with parents and staff on child development
- Facilitate transitions from pre–school programs to kindergarten, then to first grade, etc.
- Assist with the medical, psychological, social, emotional, and intellectual assessment of children
- Provide information and support regarding future educational goals

for Notes

INFUSING GENDER EQUITY

To ensure that the climate for learning is positive for both girls and boys as they begin schooling, the counselor can do the following:

- Develop presentations for parent groups which describe gender stereotyping as it often occurs in a child's early school experience and the important role of parents as advocates for gender equality.
- Take leadership among colleagues to address gender issues as they apply to the total school environment.
- Identify ways that the physical characteristics of schools (bulletin boards, displays of awards, presence of both males and females in both leadership and support roles) communicate institutional gender equality.
- Synthesize the current literature on the differential treatment of girls and boys and share in discussions with colleagues.
- Suggest an action agenda for staff development to enhance the learning environment for both girls and boys.
- Prepare information bulletins for parents and teachers which highlight special developmental needs of both girls and boys, with emphasis on increasing gender equity (recognizing the possible effects of youngsters' earlier gender role socialization).

for Notes

GOAL 2: GRADUATION RATE AND READINESS FOR POSTSECONDARY EDUCATION AND EMPLOYMENT

The counselor works directly with all students, parents, teachers, community members and employers to:

- Provide life skills training
- Accurately determine each student's required courses for graduation, and available high interest courses
- Provide information regarding requirements and specialties of postsecondary institutions
- Assist students in developing Career Plans targeting graduation
- Assist with referrals for tutoring, peer facilitation, psychological, health, or social work services
- Encourage and prepare students to take college placement exams
- Motivate with information and assistance regarding financial aid
- Assist high–risk students with problem solving, such as illness, pregnancy, poverty, attendance, drugs, or relationships
- Provide information and exploration of a variety of postsecondary opportunities
- Prepare and assist with High School Competency Testing
- Ensure proper placement of students with special needs

INFUSING GENDER EQUITY

To promote an increase in the number of students who graduate, the counselor in Florida's schools can do the following:

- Work with the school administrators to create a data collection system that clearly identifies the educational progress of females as well as males.
- Make special efforts to coordinate counseling and guidance resources with programs that serve girls and women who are single parents, displaced homemakers and single pregnant women.
- Provide students with career exploration opportunities and up–to–date occupational information to increase their knowledge of labor market requirements for females and males to enter and advance in high wage nontraditional career fields

- Organize peer workshops or seminars featuring male and female role models to promote the importance of program completion and graduation.
- Present facts on the adult economic status and lifestyles of both females and males who left school at several intervals: drop–outs; program completers; non–graduates; high school graduates; post–secondary program completers and graduates.
- Use classroom guidance opportunities to teach interpersonal and negotiation skills and to give young women and young men the chance to practice in a non–threatening environment.
- Use posters, bulletin board articles or handouts to remind all students about their legal rights, particularly as they relate to gender equity.

for Notes

Goal 3: Student Performance

The counselor uses a developmental counseling curriculum working directly with students to:

- Develop goal–setting skills and attainment strategies
- Provide recognition of achievement enhancing motivation for academic excellence
- Develop study skills, time management, and organizational skills
- Advise of appropriate student placement, course selection, and educational track
- Develop transferable skills to facilitate changes throughout life
- Identify and support children at risk of failure and/or dropout
- Encourage higher levels of math and science in preparation for post-secondary education
- Develop healthy self–concepts, self–awareness, and a sense of responsibility
- Expand test–taking strategies, stress management, and problem–solving techniques
- Improve social skills, openness to others, sense of cooperation, compromise and conflict resolution
- Provide early intervention to minimize mental and emotional problems before they become severe

INFUSING GENDER EQUITY

Counselors can help females and males prepare for responsible citizenship, further learning and productive employment by doing the following:

- Become well informed themselves, through independent study or staff development seminars, about educational and employment barriers which impede full participation of females or males in life and in careers; ways to overcome these barriers.
- Organize in–class and/or small group guidance programs for girls and women to discuss issues such as balancing home and career, coping with multiple life and career roles, time management.
- Share with teachers and other school personnel knowledge about current research that bears on development of self esteem and self confidence, leadership, and other qualities associated with responsible citizenship.
- Organize small group guidance programs for young men to discuss responsible behavior toward females and issues of sexual harrassment.
- Ensure that any interpretation of aptitude and interests highlight, as appropriate, related courses of study and the importance of considering nontraditional career fields such as those that require mathematical or scientific skills.
- Use conflict resolution seminars to treat male/female interpersonal issues.

GOAL 4: LEARNING ENVIRONMENT

In order to provide a learning environment conducive to teaching, counselors:

- Help create a positive school climate in which students can learn
- Focus on prevention and offer interventions that equip students to deal successfully with developmental issues
- Assist teachers in altering behaviors which interfere with instruction
- Encourage students to participate in school activities to increase a sense of belonging
- Provide recognition of student and staff accomplishment
- Offer intervention strategies for attendance problems
- Empower students to make informed choices and decisions

INFUSING GENDER EQUITY

Introduce the concept of cultural diversity as a staff development topic and give colleagues exposure to realities and myths about life in multicultural societies such as the United States.

To empower students, particularly girls and women who may not be aware of careers in the worlds of math, science and technology, the counselor can do the following:

- Inform colleagues about the under–representation of women in math and science careers and the relationship between teacher expectations and later career decisions students make.
- Recommend mathematics, science and/or technology courses in middle, junior high and in secondary schools that expand career options available to girls and women.
- As a part of career development activities, emphasize the need for mathematics skills in multiple career fields and provide peer role models to validate the importance of developing higher level skills while in school.
- Provide students with career information that highlights gender–alike role models who are achieving career success – both locally and nationally – in mathematics, science, and technology fields.

GOAL 5: SCHOOL SAFETY AND ENVIRONMENT

The counselor will work directly with students to:

- Provide recognition of student and staff accomplishment
- Offer student assistance, crisis counseling, referral to community agencies
- Improve family relationships by consulting with parents, and offering parenting workshops
- Direct students into positive, appropriate activities
- Identify and intervene when behaviors endanger themselves or others
- Provide information or prompt reporting of abuse or threats to personal safety
- Develop responsible decision–making skills and acceptable social skills
- Develop effective classroom management systems and discipline programs supporting the "Code of Student Conduct"
- Promote wellness and healthy lifestyles

for Notes

for Notes

INFUSING GENDER EQUITY

The counselor can ensure a safe school environment by doing the following:

- Become well informed on the subject of sexual harassment and proactive in initiating awareness programs for all young people.
- Design workshops for both students and colleagues, males and females, to address issues of physical abuse and victim support services.
- Create visual aids and/or provide literature to increase knowldge about drugs and alcohol abuse including detrimental personal effects as well as effects on unborn children.
- Conduct workshops for parents to address their pressing problems and concerns about adolescent sexual activity and harassment and ways to counsel with young people on healthy relationships.

GOAL 6: TEACHERS AND STAFF

The counselor works directly with school personnel by:

- Elevating general morale, encouraging cooperation, providing professional recognition
- Providing consultation and assistance with barriers to learning
- Providing inservice and staff development activities involving affective education, classroom management, stress reduction, time management, exceptional education, etc.
- Providing confidential consultation or referral in personnel matters as well as emotional and professional support
- Maintaining their own high level of competency through inservice and professional affiliations
- Participating on School Advisory Councils and in the development of comprehensive School Improvement Plans
- Acting as liaisons to parents and community

INFUSING GENDER EQUITY

To ensure that gender equity is a priority in counselor consultation with school personnel, the counselor can do the following:

- Help them acquire new knowledge about survival skills young people need in the world of work including time management, personal assertivness, and handling sexual harassment.
- Increase sensitivity to diversity within staff and student populations and the implications for gender equity by organizing staff development seminars.
- Initiate dialogue among colleagues on ways to assess gender fairness in classroom student/student and student/teacher interactions.
- Periodically review the literature on gender equity (such as AAUW and Wellesley College studies) and provide written suggestions for teachers and administrators on ways to improve the classroom climate.

for Notes

Goal 7: Adult Literacy

The counselor works directly with students to:

- Facilitate personal and academic growth
- Help adult students develop interpersonal skills
- Provide counseling, advisement and encouragement to adult learners returning to the academic environment
- Provide information and assistance regarding adult education programs and learning opportunities
- Ensure members of all cultures access to appropriate services
- Provide academic advisement and assessment to ensure proper selection of educational programs
- Provide career opportunity information
- Job placement assistance and follow–up

INFUSING GENDER EQUITY

To promote gender equity as a part of adult literacy efforts, the counselor can do the following:

- Take the initiative to organize a study of adult literacy or be part of a community survey in order to identify needs by gender.
- Examine career counseling literature and occupational information to ensure they are free of gender bias and that they encourage wide exploration of careers including those that are typically nontraditional.
- Arrange staff development activities that include familiarization of these guidelines.

Activity

60–120 minutes

Review each of the Florida Blueprint 2000 goals and counseling descriptors. Several suggestions are given to infuse gender equity concepts as a part of developmental counseling and guidance. In small groups, review the goal statement, the counseling descriptors and the suggested gender equity strategies. Add new strategies on the accompanying table.

for Notes

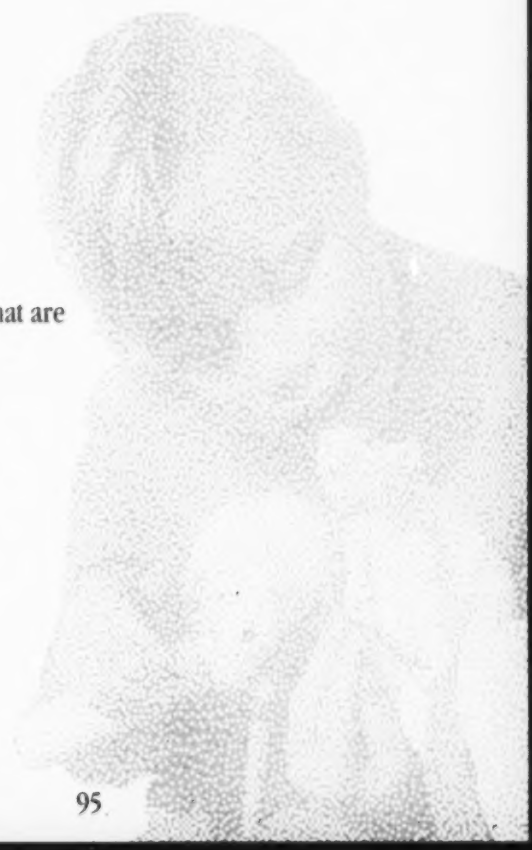
INFUSING GENDER EQUITY INTO COUNSELING AND GUIDANCE PRACTICES

GOAL 1: Readiness to Start School

To ensure that the climate for learning is positive for both girls and boys as they begin school, the counselor can:

GOAL 2: Graduation Rate and Readiness for Postsecondary Education and Employment

To promote an increase in the number of females as well as males who graduate, the counselor in Florida schools can:



GOAL 3: Student Performance

The counselor in Florida can help males and females acquire skills that are both transferable to careers and that are free of gender stereotyping by:

GOAL 4: Learning Environment

To ensure that the learning environment is free of gender bias and welcoming for diverse populations, the counselor can:

GOAL 5: School Safety and Environment

To ensure that all students are provided with a safe and equitable environment, the counselor can assist males and females by:

GOAL 6: Teachers and Staff

The counselor can ensure that a collaborative relationship is established with colleagues to promote gender equity by:

GOAL 7: Adult Literacy

The counselor can ensure gender fairness in adult literacy programs by:

SURVEYING THE INSTITUTIONAL STATUS OF GENDER EQUITY

for Notes

Building a gender equitable community begins with a shared common knowledge about gender, an examination of the school climate, and an appreciation of the impact of gender on classrooms and student learning. In the gender equitable school, there is zero tolerance for bias and bigotry. It is the institutionalization of gender equity that is crucial to the permanent eradication of stereotyping and sexism.

Institutionalization of gender equity is most readily accomplished when all members of the education community address the gender equity needs openly and collaboratively. The shared vision of an equitable community moves toward reality when the following occur:

- All members of the education community are involved in assessing the current culture and the status of gender equity
- All members of the education community are involved in discussions to determine and clarify what is meant by gender–equitable practices in schools and colleges
- All members of the education community are involved in developing a local plan for the continuous monitoring of gender equity to ensure its vital role in the culture of the institution.

SURVEY METHODS

2 to 4 hours (1, 2 or 3 sessions)

For this workshop, a survey package originally prepared by the State of Wisconsin has been adapted for use in Florida's schools and community colleges. The three surveys tap into the status of actions that need to be taken by administrators, teachers and counselors to ensure the institutional adoption of practices to promote gender equity.

The workshop is designed to familiarize educators with the content of all surveys so that administrators can use them as positive assessment tools at home institutions. The intent of the surveys is to provide information for several purposes:

for Notes

- both self and institutional assessment
- feedback that describes the current status of gender equity by personnel within the institution
- collection of data that can be used over several data collection periods to document change

A school district or community college administrative leader, such as a superintendent of schools or a community college president, may want to use the surveys to assess the status of gender equity district–wide or college–wide.

Turn to the Administrators' Survey first. The initial task to be accomplished is to determine the usefulness of the tool for the three purposes listed earlier. Small groups should be organized and allocated approximately 20 minutes to examine the content, identify ambiguities that need to be clarified, and identify any concerns about the use of the survey at the home institution.

The following questions can be used to focus the whole group on the importance of institutional assessments for gender equity. The questions can be approached in plenary or small group sessions. First, it is essential to give the workshop participants the opportunity to express their own feelings about gender equity and their roles as leaders to ensure that gender equity becomes a reality at their institutional levels.

DISCUSSION QUESTIONS

- What will you need to do at your institution to lay the groundwork for an assessment of the status of gender equity?
- Have school improvement study groups already addressed the status of equity or is this something you as an institutional leader need to initiate?
- What can you do to support "ownership" of gender equity by each person on the staff?

The counselor and teacher survey forms are reviewed next using groups to identify ambiguities as well as concerns and issues that need to be discussed. After approximately 20 minutes for review, the participants can respond to the following questions, which are addressed best in small groups with feedback at the conclusion of a given period of time. (Approximately one hour)

- What information about gender equity does the school staff need if they are to approach surveys on gender equity in a positive, receptive manner?
- What structures work best within institutions to promote change and adoption of new ideas?

- What steps can be taken to defuse the threat people may feel about the use of surveys as evaluation instruments?

A continuation of the workshop can be organized after an initial survey has been completed. Participants can review their institutional results and discuss the following questions:

- What kinds of information were produced as a result of the survey?
- How can the information be used to develop an action plan for an individual, a department or a school/college?
- What did you learn about the use of the survey?
- Which procedures worked and which did not?
- What do you need to do differently the next time?
- What emendations, if any, need to be addressed in the surveys?
- What will be the nature of follow–up to ensure that an action agenda for gender equity is pursued?

for Notes

Staff SURVEYS

This section includes three information packets designed to survey gender equity practices of counselors and teachers. The packets include a survey description, survey and "Strategies for Sex Equity" sheets.

The surveys have been adapted from Staff Surveys designed as part of the WISCONSIN MODEL FOR SEX EQUITY IN CAREER AND VOCATIONAL EQUITY, published by the Wisconsin Department of Public Instruction, 1993.

Grateful appreciation is accorded to Wisconsin Department of Public Instruction officials for permission to use the materials contained in this section.

ADMINISTRATOR SURVEY

The following survey has been developed for administrators to assess and plan for an equitable school environment. The survey is designed to be used by the administrative leaders involved in the management of the school or college.

Sex equity is an important school improvement issue. It is, however, complex and difficult to picture in action. We can examine administrative components such as: policy development, leadership for staff members, inservice, enrollment monitoring, scheduling, and community awareness. This survey helps individuals examine how educational equity looks from an administrator's perspective.

As educators responsible for the next generation, it is imperative that we monitor and analyze the social and economic changes in the lives of women and men in our society. By acknowledging the current conditions and predicting the changes to come, we will be able to anticipate the needs of students who are now in school. We must help students prepare for a future characterized by change in the economy, the world of work, and in society.

Girls and women need to know that

- whether or not they marry and have children, they will probably be working for pay outside the home for a large part of their lives (30 years on average).
- they will need to support themselves and their families.
- unless they carefully prepare for paid work, they are more likely than males to be limited to low-paying jobs that provide little opportunity for advancement, or they are more likely to be poor and dependent on social service programs.

Boys and men need to know that

- if they marry, they will likely not be the only person who works for pay outside the home.
- they are likely to share responsibilities in the home for meals, household management, and caring for children.
- sharing work inside and outside the home offers males the opportunity to assume greater career risks, to work in areas that were once stereotyped as appropriate only for females, to enjoy children, to share economic responsibilities, and to develop a shared partnership with a spouse.

All students need to know that

- traditional ideals about work, leadership, and social roles based on gender are unrealistic and are changing; both females and males can assume nearly any role if given adequate preparation and opportunity.
- female and male students should investigate a wide range of opportunities available and should prepare for careers.
- it is their right to receive fair consideration and treatment in school, in college, and in employment.

ADMINISTRATOR SURVEY

The following survey is designed to identify actions administrators can take to work toward building an equitable educational climate. Each item is intended to assess what is currently being done as well as to provide a planning guide for what can be done to promote equity.

Directions: Listed below are steps administrators can take to achieve equity in school programs. For each item circle:

3 if it **has been** or is in the process of being done

2 if this is **in the planning stage**

1 if this **has not been** done, but will be considered

	Has been done	Planning stage	Not done
1. Develop and implement a district or college policy statement on sex equity	3	2	1
2. Develop and implement a K-12 district-wide equity plan or a college-wide equity plan	3	2	1
3. Develop and implement an inservice program for staff members to become more aware of equity issues and actions that promote equity	3	2	1

	Has been done	Planning stage	Not done
4. Collect and analyze staffing pattern data by female/male	3	2	1
5. Actively select women to serve in leadership roles, such as departmental chairs, chairs of special committees, and in leadership training sessions	3	2	1
6. Actively select men to serve in supportive/nurturing roles	3	2	1
Ensure that equal employment opportunity is practiced in:			
7. development of job descriptions and qualification requirements	3	2	1
8. advertisement	3	2	1
9. employment interviews	3	2	1
10. wages and benefits	3	2	1
11. opportunities for advancement	3	2	1
12. Assist staff in providing a bias-free environment for students	3	2	1
13. Provide leadership in changing curriculum to ensure that both content and instructional materials are sex fair and help students prepare for expanding roles	3	2	1
14. Design the master class schedule to encourage sex-fair enrollment patterns. For example, avoid scheduling a traditionally female class at the same time as a traditionally male class	3	2	1
15. Monitor class enrollment trends, paying particular attention to any class or program enrolling more than 75 percent of one sex	3	2	1
16. Promote the idea of equity and educational excellence to parents and community members through advisory committees, task forces, newsletters, and other means	3	2	1
17. Ensure compliance with federal and state nondiscrimination requirements	3	2	1

	Has been done	Planning stage	Not done
The following activities are being used to promote equity:			
18. required vocational exploratory courses for all students	3	2	1
19. student orientation sessions that highlight non-traditional occupations and the training needed for these occupations	3	2	1
20. prevocational classes or sessions that orient students to a nontraditional area	3	2	1
21. peer support groups for students enrolled and considering enrolling in nontraditional classes	3	2	1
22. active encouragement and support by counselors for students interested in nontraditional careers	3	2	1

23. Please describe the content and duration of any training in gender equity you have had.

24. Check one (*please do not omit*): ❑ male ❑ female

Administrative Strategies for Achieving Sex Equity

Administrators can promote equity in several ways. They can

- recognize equity as an important issue and actively plan for it;
- develop and implement sex-equitable policies;
- plan for and support staff development activities related to equity; and
- establish a school climate that promotes excellence in education, including equity for staff members, students, parents and community.

Administrators can use the following strategies to promote sex equity at the college, district and school levels:

1. Identify what has already been done to promote equity.
2. Develop policies, procedures, and guidelines that specifically plan for equity.
3. Establish objectives, activities, and a timeline for activities that increase nontraditional enrollment and staffing patterns.
4. Analyze enrollment and staffing data by sex and by course to identify trends and possible intervention points.
5. Provide inservice programs on equity issues for all staff. These may include topics on current work statistics; family trends; and how to provide for a sex-equitable classroom using appropriate materials, curriculum, language, instruction, and beliefs.
6. Offer bias-free classroom technique suggestions in teacher evaluations, especially in courses where enrollments are predominantly male or female.
7. Use staff meetings and other staff communication channels to build awareness and support for equity.
8. Actively plan to recruit men and women for nontraditional teaching and administrative positions.
9. Promote sex-equity issues with parents and community members through newsletters, school board members, and advisory meetings.
10. Develop a plan to review classroom, library, and guidance materials for evidence of sex bias and to modify them where appropriate. Adopt and use selection criteria for new materials that reflect diversity and equity.
11. Organize curriculum revision projects that redesign program content and activities to make them appropriate for both males and females and to prepare students for expanding and changing roles of men and women.
12. Offer opportunities that encourage students to explore non-traditional options and familiarize them with language and equipment of the area.
13. Design the master class schedule so it encourages enrollment by males and females in every class. For example, a traditionally female class is not scheduled at the same time as a traditionally male class.

Guidance Counselor Survey

The following survey has been developed to assist guidance counselors in identifying equity issues and planning for equity in counseling programs. The survey is designed to be used by guidance counselors at the secondary and community college levels. However, elementary guidance counselors may also find the survey helpful as many strategies are appropriate for all levels.

Sex equity is an important developmental guidance issue. It often can be difficult to picture it in action. To understand equity within the framework of guidance and counseling, we can look at career exploration, enrollment patterns, recruitment and retention of students, counseling materials, tests, resources, and the role of counselor as an equity advocate. Following are some equity facts to help you to think about the equity issue.

Women work for pay for the same reasons that men work for pay: to meet financial responsibilities, to achieve a sense of contribution to society, and to achieve a sense of personal fulfillment. Opportunities for women to meet financial responsibilities and achieve societal and personal goals have been limited by the fact that women have been concentrated in a relatively few, low-paying occupational fields in the labor force. By expanding career choices and emphasizing the reality of job futures, both females and males will approach life work planning more realistically.

The following survey items list actions counselors can take to work toward building an equitable school climate. This survey is intended to assess current efforts to provide for equity, to teach counselors what could be done, and to serve as a planning guide for future efforts.

Complete the survey and use its results to determine which areas need to be focused on in building equity into your guidance program.

It has been shown that guidance counselors are key people in building sex-equity programs in schools and colleges. What are you doing to promote sex equity in your school? Listed below are some activities and actions that contribute to sex–equitable guidance programs. For each item, please circle:

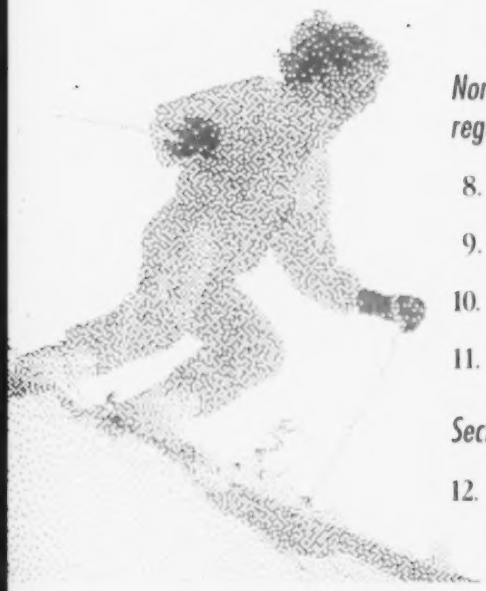
3 if it **has been** or is in the process of being done

2 if this is **in the planning stage**

1 if this **has not been** done, but will be considered

	Has been done	Planning stage	Not done
Section 1: Career Exploration			
1. Encourage students to make academic, career and personal decisions on the basis of individual abilities, informed interests, and need rather than on the basis of their gender	3	2	1

	Has been done	Planning stage	Not done
2. Publicize current information about work force trends to point out the importance of increasing male and female options in career choices	3	2	1
3. Provide realistic information about students' probable job futures (for example, most women and men can expect to hold paying jobs even if they marry and have children)	3	2	1
4. Encourage young women and men to take courses that lead to economic self-sufficiency	3	2	1
5. Remind both females and males that mathematics and science are required for jobs of the future and that they should include these courses in their schedules	3	2	1
6. Point out that there is a wage inequity by job area (for example, "female jobs" pay lower salaries than typically "male jobs")	3	2	1
7. Discuss job salaries as they relate to career interest with both female and male students	3	2	1
Nontraditional career options are presented to students on a regular basis through:			
8. preregistration sessions	3	2	1
9. career fairs	3	2	1
10. guest speakers	3	2	1
11. career education materials and activities	3	2	1
Section 2: Enrollment			
12. Statistics are collected and analyzed by course and program to determine patterns in male/female enrollments on a regular basis. (More than 75 percent enrollment of one sex is considered an area of concern)	3	2	1
Section 3: Recruitment and Retention of Students			
13. There is a plan in operation that encourages students to enroll in non-traditional classes	3	2	1
14. The school is initiating new and earlier opportunities for the students to explore nontraditional options at elementary and middle/junior high levels	3	2	1



	Has been done	Planning stage	Not done
15. Nontraditional role models-— both men and women — are used as speakers for career days, shadowing, mentoring, and classroom instruction	3	2	1
16. Students enrolled or who plan to enroll in nontraditional classes are supported through support groups and contacts with role models and counselors	3	2	1

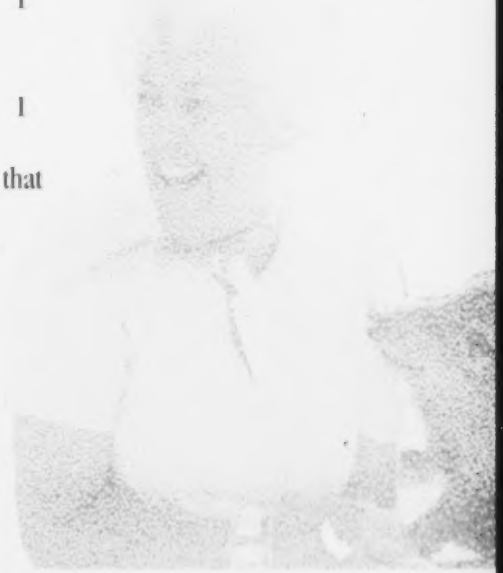
Section 4: Materials

17. Counseling materials, including tests and inventories, are reviewed; those that may reinforce bias and stereotyping are modified or eliminated	3	2	1
18. Career counseling materials are current, reflecting new and emerging and nontraditional occupations	3	2	1
19. Find and use materials that show the changing roles of men and women in our society, both in the family and in the workplace	3	2	1
20. Coordinate bulletin boards and displays that portray women and men working at a variety of jobs, including nontraditional jobs	3	2	1

Section 5: Equity Advocate

21. Assist in planning staff development activities on equity issues	3	2	1
22. Developmental guidance is being implemented in this institution	3	2	1

23. Please describe the content and duration of any training in gender equity that you have had.



24. Check one (*please do not omit*): ❑ male ❑ female

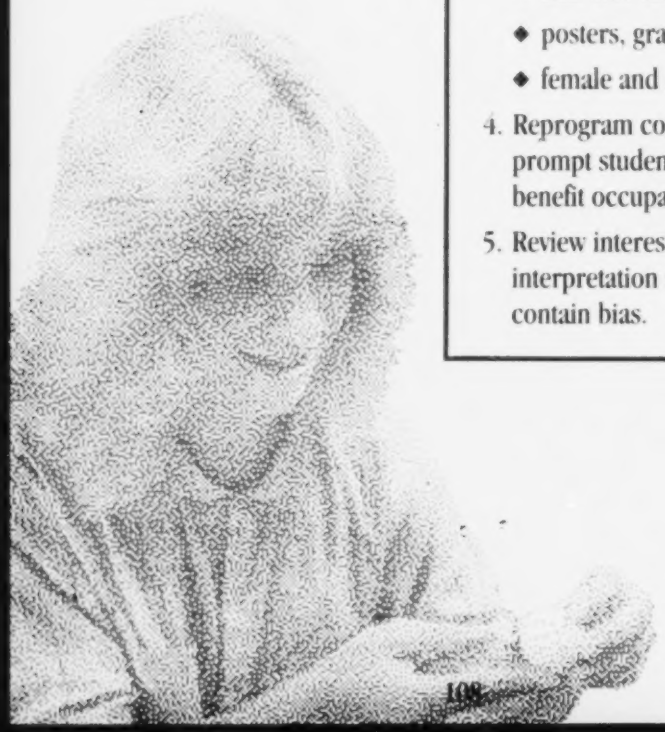
Guidance Counselor Strategies for Achieving Sex Equity

Guidance counselors can promote equity in several ways. They can

- recognize equity as an important issue and actively plan for it.
- incorporate equity concepts and actions into the K-12 and community college guidance programs.
- provide teachers with support materials that promote equitable career planning.
- ensure that they are meeting the requirements of Title IX and state laws outlining equity for counseling

Guidance counselors can use the following strategies to promote gender equity:

1. Identify current strategies within the guidance program that promote equity and build on those activities.
2. When students are selecting courses and programs in which to enroll, encourage them to consider their options realistically. Remind them that
   - most men and women will hold paying jobs for most of their lives;
   - most men and women work out of economic need;
   - traditionally female jobs pay less than traditionally male jobs;
   - even though greater choices are available, many students — especially girls — don't enroll in courses such as mathematics and science, which limit their choices in future coursework and employment.
3. Use career information that expands career choices:
   - materials that promote sex fairness;
   - bias-free language;
   - posters, graphics, and other materials that expand career ideas; and
   - female and minority role models included as speakers on career days.
4. Reprogram computer career information materials, as necessary, to prompt students to explore nontraditional or higher wage and higher benefit occupations.
5. Review interest inventories and other assessment instruments and the interpretation of results for gender. Discontinue use of those found to contain bias.



Teaching Staff Survey

This survey has been developed to help teachers assess and plan for a sex-equitable classroom. It is designed to be used by vocational as well as nonvocational teachers.

Sex equity is an important classroom issue. It is often difficult to picture it in action. However, we can look at equity as it relates to the physical environment, curriculum, language, behavior management and teacher attention. In this survey, we begin to look at what educational equity looks like in the classroom. Listed below are a few facts about equity to help you as you think about the issue.

Women work for pay for the same reasons that men work for pay: to meet financial responsibilities, to achieve a sense of contribution to society, and to achieve a sense of personal fulfillment.

Opportunities for women to meet financial responsibilities and achieve societal and personal goals have been limited by the fact that women have been concentrated in a relatively few, low-paying occupational fields in the labor force. By expanding career choices and emphasizing the reality of job futures, both females and males will approach life work planning more realistically.

The average level of education for both men and women workers in the United States is 12.7 years. Yet women working full-time are often paid an average of 70 cents for every dollar paid to men.

Teacher Survey

The following survey items include actions teachers can take to work toward building an equitable classroom climate. This survey is intended to assess current efforts to provide for equity, to teach instructional staff members what can be done, and to serve as a planning guide for future efforts.

Directions: Listed below are steps teachers can take to achieve gender equity the classroom. As you respond to statements, think about your own classroom situation. For each item, please circle:

3 if it **has been** or is in the process of being done

2 if this is **in the planning stage**

1 if this **has not been** done, but will be considered

	Has been done	Planning stage	Not done
Section 1: Curriculum and Materials			
1. Review curriculum, content, activities and projects for appropriateness to both females and males on a regular basis	3	2	1

	Has been done	Planning stage	Not done
2. Eliminate or modify materials or activities that may reinforce bias and stereotyping	3	2	1
3. Collect and analyze enrollment statistics by course and program to determine female/male enrollment patterns	3	2	1
4. Infuse ideas about careers in lesson plans. Incorporate current information on changing trends in the work force. Discuss the importance of expanding female and male choices in careers	3	2	1
5. Reinforce realistic job futures (for example, most women and men can expect to hold paying jobs even if they marry and have families)	3	2	1
6. Use materials that show the changing roles of men and women, both in the workplace and in the family	3	2	1
7. Plan student activities that help female and male students work together more effectively	3	2	1
8. Design course information materials such as brochures, course descriptions, and handouts to encourage both females and males to enroll	3	2	1

Section 2: Classroom Learning Environment

9. Evaluate teaching behaviors that encourage equity (for example, nonsexist language, discipline, and reinforcement as well as equal attention to females and males)	3	2	1
10. Portray females and males in both traditional and nontraditional roles during discussions and visually in materials and displays such as bulletin boards	3	2	1
11. Incorporate the topics of sex discrimination, stereotyping, and bias into regular course content and discussions when possible	3	2	1
12. Help arrange for nontraditional role models — both men and women — to be speakers for career days, shadowing, mentoring, and classroom instruction	3	2	1
13. Involve students in identifying examples of sex discrimination, stereotyping, and bias in textbooks, curriculum materials and media	3	2	1

	Has been done	Planning stage	Not done
14. Assist both genders in recognizing that it is very likely their adult roles will include paid work, parenting and homemaking	3	2	1
15. Model sex-fair behavior in actions and words conveying to others the importance of equality	3	2	1

16. Check one (*please do not omit*): ❑ male ❑ female

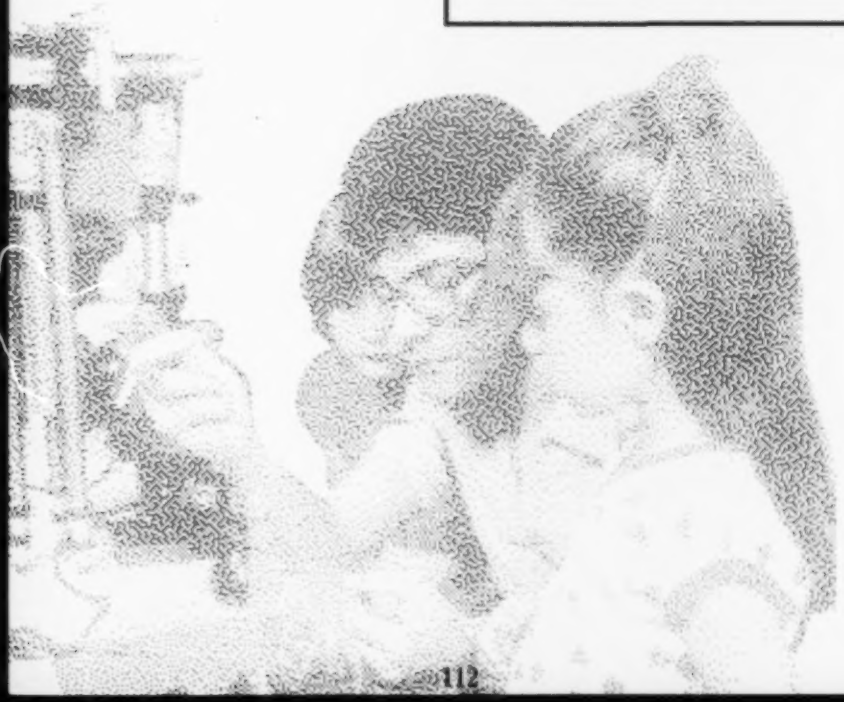
17. Please describe the content and duration of any training in sex equity you have had.

18. Which of the following describes the area you teach?

- ❑ General (elementary, mathematics, English, physical education, music and others)
- ❑ Vocational (agriculture education, business education, technology education, or other)
- ❑ Other (special/alternative programs)
- ❑ Specify:

Teacher Strategies for Achieving Sex Equity

1. Recognize the key role you play in creating an equitable classroom.
2. Plan your classroom to portray sex fairness. Use posters and other visuals that show both males and females in traditional and nontraditional roles that show males and females working together.
3. Check learning activities for sex fairness. Also plan lessons that focus on increasing students' equity awareness, knowledge and skills.
4. Use inclusionary language in both written and verbal communication. Encourage students to do the same.
5. Direct class discussion to enable all students to participate. Studies have shown that teachers give more attention to male students, calling on them more frequently, asking them higher-order questions, offering them more assistance, and disciplining them more often.
6. Promote cooperation and integration of males and females through activities that help student work together more effectively.
7. Help students understand equity issues and the impact these issues have on their lives
8. Avoid generalizations and sex stereotypes, such as "you drive like a woman" or "you think like a man."
9. Encourage both women and men to participate in traditional and nontraditional activities.
11. Examine instructional materials for sex-role stereotyping, sex bias and sexist language. Discuss and point these out to students.
12. Make a conscious effort to assign females and males leadership roles on an equitable basis, both within and outside the classroom.



Duplicating Masters

Programming for Gender Equity

CHECKING YOUR STEREOTYPES

Instructions: Check those traits which apply in each column.

Character Trait	Male	Female	Describe Me	Are Most Valued by Society
peaceful	___	___	___	___
driven	___	___	___	___
mathematical	___	___	___	___
passive	___	___	___	___
aggressive	___	___	___	___
emotional	___	___	___	___
logical	___	___	___	___
objective	___	___	___	___
dominant	___	___	___	___
independent	___	___	___	___
cooperative	___	___	___	___
competitive	___	___	___	___
quiet	___	___	___	___
active	___	___	___	___
verbal	___	___	___	___
leader	___	___	___	___
listener	___	___	___	___
talker	___	___	___	___
self-confident	___	___	___	___
adventuresome	___	___	___	___
expressive	___	___	___	___
controlled	___	___	___	___
indecisive	___	___	___	___
artistic	___	___	___	___
athletic	___	___	___	___
neat	___	___	___	___
spiritual	___	___	___	___
practical	___	___	___	___
gentle	___	___	___	___
rough	___	___	___	___
caring	___	___	___	___
egocentric	___	___	___	___

ASSESSING THE CLIMATE

A PERSONAL CHECKLIST FOR EDUCATORS COMMITTED TO EQUITY

_____ Using nonsexist language, i.e., not referring to doctors, athletes and lawyers as "he" and nurses, secretaries, and hair stylists as "she."

_____ Using examples in teaching which show men and women with a wide range of feelings, interests, and career choices.

_____ Supplementing inadequate treatment of either sex in classroom materials by adding information and by discussing the inaccurate information, portrayal of roles, etc.

_____ Avoiding comparison of students based on gender, e.g.,."the girls' papers are much neater than the boys'."

_____ Giving equal attention to girls and boys; assigning classroom, library, gym, and office jobs without regard for gender.

_____ Allowing students to express values and feelings without regard to sex, i.e., both boys and girls can be assertive and gentle, etc.

_____ Helping students explore all vocational interests, not only those traditionally associated with their sex.

_____ Expecting equal academic performance from girls and boys in all subjects.

_____ Expecting the same range of behaviors, language, dress from boys and girls; disciplinary responses are equitable both in terms of swiftness and severity.

_____ Using visual materials in classrooms and public areas which depict women, men, girls, and boys in a wide range of activities, careers, etc.

_____ Ensuring that all printed materials equally feature and report the extracurricular achievements and activities of all students.

_____ Encouraging boys and girls to participate in a variety of extracurricular activities and to compete for leadership positions in clubs and class activities.

_____ Challenging sexist language, expectations, and behavior displayed by students, colleagues, and parents.

SOURCE: ASSESS (Assessing Sex Equity in Schools and Society), Michigan Center for Career and Technical Education, Michigan State University, East Lansing

YOUR STYLE OF LEARNING AND THINKING

DIRECTIONS: Students think and learn about things in many different ways. Each question below talks about different ways that students think about and learn things. Of the two choices, pick the one that best tells how you think and learn about things, using your left brain or right brain.

1. (a) I remember faces more easily than names.
   (b) I remember names more easily than faces.

2. (a) I answer best to directions which are told to me or written out.
   (b) I answer best to directions when I have someone to show me how.

3. (a) I like to let people know how I feel.
   (b) I keep my feelings to myself.

4. (a) I prefer to do things one at a time.
   (b) I prefer to do more than one thing at a time.

5. (a) I prefer tests where the answers are given to me and I am asked to pick out the best one.
   (b) I prefer tests where I write the answers out myself.

6. (a) I can tell when a person is happy or not without the person telling me.
   (b) People have to tell me when they are happy or sad.

7. (a) I am good at thinking up funny things to say and do.
   (b) I am not good at thinking up funny things to say and do.

8. (a) I prefer teachers who show me how to do things.
   (b) I prefer teachers who tell me how to do things.

9. (a) I like to know everything about a question before I answer it.
   (b) I answer questions according to the way I feel.

10. (a) I like to have fun when I try to figure things out.
    (b) I like to have quiet when I try to figure things out.

11. (a) I like to make up my own games when I play.
    (b) I always like to play by the rules with no changes.

12. (a) I am willing most of the time to use anything around to get things done.
    (b) I like to use the right tool for the right job.

13. (a) I like teachers who tell me what to learn and how to learn it.
    (b) I do not like teachers who tell me what to learn and how to learn it.

14. (a) I usually come up with new things and ideas.
    (b) I rarely come up with new things and ideas.

15. (a) I usually seem to know what other people are thinking.
    (b) I rarely seem to know what other people are thinking.

16. (a) I often use examples when I talk.
    (b) I hardly use any examples when I talk.

17. (a) I often get my ideas from examples.
    (b) I hardly get any ideas from examples.

18. (a) I prefer to work on one problem at a time.
    (b) I prefer to work on many problems at the same time.

19. (a) I prefer to learn facts like names and dates.
    (b) I prefer to learn about what people think might happen someday.

20. (a) The way I answer a problem usually depends on the way I feel inside.
    (b) I answer the problem by carefully picking the best answer.

21. (a) I like to picture the answer to a problem in my head.
    (b) I do not like to picture the answer to a problem in my head.

22. (a) I prefer to answer a question by carefully picking the best answer.
    (b) I prefer to answer questions by guessing.

23. (a) I can explain myself better by talking without moving my hands.
    (b) I can explain myself better by moving my hands while I talk.

24. (a) I learn best when the teacher explains the lesson to me in words.
    (b) I learn better when the teacher shows me a picture of what he wants me to do.

25. (a) I prefer to figure out all the steps in the answer to a problem.
    (b) I prefer to write out everything about the answer to a problem.

26. (a) I prefer to tell a story by talking or writing it down.
    (b) I prefer to tell a story by drawing or acting or giving a puppet show.

27. (a) I get lost very easily.
    (b) I can find my way around even in strange places.

28. (a) I prefer to do things.
    (b) I prefer to explain things.

29. (a) In school, I prefer drawing to reading.
    (b) In school, I prefer reading to drawing.

30. (a) I find it easy to read maps.
    (b) I find it hard to read maps.

SOURCE: Keenan and Smith

ANSWER SHEET

YOUR STYLE OF LEARNING AND THINKING

1.	(a) R (b) L	16.	(a) R (b) L
2.	(a) L (b) R	17.	(a) R (b) L
3.	(a) R (b) L	18.	(a) L (b) R
4.	(a) L (b) R	19.	(a) L (b) R
5.	(a) L (b) R	20.	(a) R (b) L
6.	(a) R (b) L	21.	(a) R (b) L
7.	(a) R (b) L	22.	(a) L (b) R
8.	(a) R (b) L	23.	(a) L (b) R
9.	(a) L (b) R	24.	(a) L (b) R
10.	(a) R (b) L	25.	(a) L (b) R
11.	(a) R (b) L	26.	(a) L (b) R
12.	(a) R (b) L	27.	(a) L (b) R
13.	(a) L (b) R	28.	(a) R (b) L
14.	(a) R (b) L	29.	(a) R (b) L
15.	(a) R (b) L	30.	(a) R (b) L

Advising Students on Course Selection

Student Says	You Say
But I don't like math.	
But I don't do well in math.	
It'll hurt my gradepoint average.	
I don't like the teacher.	
I'm not going to need it anyway.	
It's boring.	
My mother/sister/father/brother/friend didn't need math.	
I feel dumb in math class.	
I don't want to be a nuclear physicist or anything like that.	
I'm going to get married and have babies.	

Adapted from: "Title IX Line," Center for Sex Equity in Schools, University of Michigan.

What Administrators Can Do to Encourage Girls in Math

Research in effective schools points most decidedly to the principal's crucial role in promoting student achievement. The principal, department chair, or curriculum coordinator who leads a gender equity effort in mathematics will

- Have a basic understanding of the instructional strategies that encourage girls in mathematics.
- Promote awareness in a secondary school by gathering and disseminating enrollment information, and standardized test score item analyses by problem type and gender.
- Make time and resources available for awareness-building activities for teachers, counselors, parents and students.
- Support staff development in math equity to help promote equitable teaching strategies and curriculum.
- Allocate budget for manipulatives and other problem solving educational materials.
- Support staff development for other subject teachers who suffer from math avoidance, to help them promote math related activities and positive attitudes in their classrooms.
- Ensure that award criteria, club strategies and other forms of mathematics recognition are consistent with the principles of an equitable climate.
- Include equitable teaching strategies in teacher and administrator evaluation and accountability.
- Support the formation of networks for students and teachers to help encourage girls in math and science.

SOURCE: "Title IX Line" Center for Sex Equity in Schools, University of Michigan.

SELF-ASSESSMENT FOR WORKFORCE DEMOGRAPHICS

Write your responses to each of the following:

1. During the last two decades, have the numbers of women in the workforce (a) increased, (b) decreased, (c) stayed the same. Explain your answer.

2. What do you think will be some of the major changes in the workplace of the next century?

3. In general is there still a wage gap between the salaries that men and women earn? If your answer is yes, what is the nature of that gap?

4. What career fields do you think have the largest wage gap between men and women?

5. In a traditional female field such as registered nursing, do you think there is a wage gap between the salaries of women and men? Why?

6. Do you think that boys should consider nontraditional careers? Should girls consider nontraditional careers? If so, give examples for each.

7. How have your expectations of the career potential of girls and women changed over the years? of boys and men?

OCCUPATIONAL STEREOTYPES CHECKLIST

Examine this list of occupations. In the space on the left, put an "F" for occupations you consider to be traditional female occupations, an "M" for those you consider to be male occupations, and "E" for either.

		Mean
_____	A/C, Heating and Refrigeration Mechanic	$11.45
_____	Accounting Clerk	8.50
_____	Administrative Assistant	11.12
_____	Auditor	16.37
_____	Automotive Mechanic	11.56
_____	Cashier	5.31
_____	Chef	10.89
_____	Child Care Worker	5.41
_____	Communications Equip Installer/Repairer	12.96
_____	Computer Operator	9.97
_____	Corrections Officer	12.26
_____	Clerk, Retail	6.67
_____	Crane Operator	11.26
_____	Data Processing Equipment Repairer	15.23
_____	Electrical/Electronics Assembler	7.42
_____	Electrical/Electronics Technician	13.76
_____	Emergency Medical Technician	8.09
_____	Engineering Technician	12.86
_____	File Clerk	7.31
_____	Firefighter	11.08
_____	General Office Clerk	9.40
_____	Land Surveyor	14.42
_____	Law Enforcement Officers	14.56
_____	Licensed Practical Nurse	10.55
_____	Registered Nurse	15.73
_____	Retail Salesperson	6.05
_____	Secretary	9.48
_____	Teacher Aide - Paraprofessional	7.67
_____	Teller	6.82
_____	Truck Driver - heavy	9.01

TABLE C

TOP 100 OCCUPATIONS *IN FLORIDA*, RANKED BY TOTAL PROJECTED GROWTH

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
1. Salesperson, Retail					
2. Gen Mgr/Top Exec					
3. Cashier					
4. Gen Office Clerk					
5. Waiter, Waitress					
6. Registered Nurse					
7. Secretary, except legal and medical					
8. Food Preparer/ server - fast food					
9. First Line Supervisor, sales					
10. Child Care Worker					
11. Janitor and Cleaner					
12. Nursing Aide and Orderly					
13. Food Preparation Worker					
14. Receptionist, Information Clerk					
15. Maid, Household Cleaner					
16. Sales Rep, nonscientific products except retail					
17. Guard					
18. First Line Supervisor, clerical					
19. Stock Clerk, sales floor					
20. General Farm Worker					
21. Maintenance Repairer, General Utility					
22. Accountant, Auditor					

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
23. Bookkeeping, Accounting and Auditing Clerk					
24. Cook, Restaurant					
25. Licensed Practical Nurse					
26. Truck Driver, light					
27. Teacher, elementary					
28. Truck Driver, heavy					
29. Teacher, secondary					
30. Food Service and Lodging Manager					
31. Carpenter					
32. Correction Officer, Jailer					
33. Hairdresser, Cosmetologist					
34. Gardener, Groundskeeper, except farm					
35. Home Health Aide					
36. Teacher, preschool and kindergarten					
37. Physician					
38. Lawyer					
39. Automotive Mechanic					
40. Shipping, Receiving and Traffic Clerk					
41. Dining Room and Bartender Helper					
42. Electrician					
43. Systems Analyst					
44. Computer Programmer					
45. Painter and Paperhanger					
46. Counter Attendant					

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
47. Medical Secretary					
48. Financial Manager					
49. Marketing, PR and Advertising Manager					
50. Stock Clerk, stockroom or warehouse					
51. Legal Secretary					
52. Artist, Commercial Artist					
53. Electrical, Electronic Engineer					
54. Counter, Rental Clerk					
55. Police Patrol Officer					
56. Cook, institution or cafeteria					
57. Sales Rep, scientific except retail					
58. Lawn Maintenance Worker					
59. Travel Agent					
60. Teacher's Aide, Educational Assistant					
61. Adjustment Clerk					
62. Electrical, Electronic Technician					
63. Taxi Driver, Chauffeur					
64. Plumber, Pipefitter, Steamfitter					
65. Head Packer and Packager					
66. Teacher's Aide, Paraprofessional					
67. Medical Assistant					
68. Bartender					
69. Cook, Short Order					
70. Data Entry Except Composing					

	Educational Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
71. Teacher, special education					
72. Clergy					
73. Heating, A/C, Refrigeration Mechanic					
74. Cook, fast food					
75. Sales Worker, insurance					
76. Typist, including word processing					
77. Property, Real Estate Manager					
78. Industrial Truck and Tractor Operator					
79. Property, Real Estate Manager					
80. Salesperson, parts					
81. Personnel, Training Specialist					
82. Telemarketer, door-to-door, street sales					
83. Postal Mail Carrier					
84. Firefighter					
85. Vehicle, Equipment Cleaner					
86. Bank Teller					
87. Social Worker, except med or psychiatric					
88. Social Worker, medical or psychiatric					
89. Paralegal					
90. Bill, Cost and Rate Clerk					
91. Management Analyst					
92. Grader, Sorter, ag products					
93. Engineer, Math, Natl Science Manager					
94. Sales Agent, real estate					

	Education Level Required		Non-traditional		Weekly Salary Range
	Sec	Postsec	Yes	No	
95. Administrative Services Manager					
96. Education Administrator					
97. Sales Agent, securities, financial services					
98. Instructor, nonvocational education					
99. Teacher, vocational education					
100. Radiology Technologist					

SOURCE: Florida Department of Labor and Employment Security Projections 1992-2005.

INFUSING GENDER EQUITY INTO COUNSELING AND GUIDANCE PRACTICES

GOAL 1: Readiness to Start School

To ensure that the climate for learning is positive for both girls and boys as they begin school, the counselor can:

GOAL 2: Graduation Rate and Readiness for Postsecondary Education and Employment

To promote an increase in the number of females as well as males who graduate, the counselor in Florida schools can:

GOAL 3: Student Performance

Counselors in Florida can help males and females acquire skills that are both transferable to careers and that are full of gender stereotyping by:

GOAL 4: Learning Environment

To ensure that the learning environment is free of gender bias and welcoming for diverse populations, the counselor can:

GOAL 5: School Safety and Environment

To ensure that all students are provided with a safe and equitable environment, the counselor can assist males and females by:

GOAL 6: Teachers and Staff

The counselor can ensure that a collaborative relationship is established with colleagues to promote gender equity by:

GOAL 7: Adult Literacy

The counselor can ensure gender fairness in adult literacy programs by:

STAFF SURVEYS

This section includes three information packets designed to survey gender equity practices of counselors and teachers. The packets include a survey description, survey and "Strategies for Sex Equity" sheets.

The surveys have been adapted from Staff Surveys designed as part of the **WISCONSIN MODEL FOR SEX EQUITY IN CAREER AND VOCATIONAL EQUITY**, published by the Wisconsin Department of Public Instruction, 1993.

Grateful appreciation is accorded to Wisconsin Department of Public Instruction officials for permission to use the materials contained in this section.

ADMINISTRATOR SURVEY

The following survey has been developed for administrators to assess and plan for an equitable school environment. The survey is designed to be used by the administrative leaders involved in the management of the school or college.

Sex equity is an important school improvement issue. It is, however, complex and difficult to picture in action. We can examine administrative components such as: policy development, leadership for staff members, inservice, enrollment monitoring, scheduling, and community awareness. This survey helps individuals examine how educational equity looks from an administrator's perspective.

As educators responsible for the next generation, it is imperative that we monitor and analyze the social and economic changes in the lives of women and men in our society. By acknowledging the current conditions and predicting the changes to come, we will be able to anticipate the needs of students who are now in school. We must help students prepare for a future characterized by change in the economy, the world of work, and in society.

Girls and women need to know that

* whether or not they marry and have children, they will probably be working for pay outside the home for a large part of their lives (30 years on average).
*they will need to support themselves and their families.
*unless they carefully prepare for paid work, they are more likely than males to be limited to low-paying jobs that provide little opportunity for advancement, or they are more likely to be poor and dependent on social service programs.

Boys and men need to know that

* if they marry, they will likely not be the only person who works for pay outside the home.
* they are likely to share responsibilities in the home for meals, household management, and caring for children.
* sharing work inside and outside the home offers males the opportunity to assume greater career risks, to work in areas that were once stereotyped as appropriate only for females, to enjoy children, to share economic responsibilities, and to develop a shared partnership with a spouse.

All students need to know that

* traditional ideals about work, leadership, and social roles based on gender are unrealistic and are changing; both females and males can assume nearly any role if given adequate preparation and opportunity.
* female and male students should investigate a wide range of opportunities available and should prepare for careers.
* it is their right to receive fair consideration and treatment in school, in college, and in employment.

ADMINISTRATOR SURVEY

The following survey is designed to identify actions administrators can take to work toward building an equitable educational climate. Each item is intended to assess what is currently being done as well as to provide a planning guide for what can be done to promote equity.

Directions: Listed below are steps administrators can take to achieve equity in school programs. For each item circle:

3 if it **has been** or is in the process of being done
2 if this is **in the planning stage**
1 if this **has not** ben done, but will be considered

	Has been done	**Planning stage**	**Not done**
1. Develop and implement a district or college policy statement on sex equity...	3	2	1
2. Develop and implement a K-12 district-wide equity plan or a college-wide equity plan.....	3	2	1
3. Develop and implement an inservice program for staff members to become more aware of equity issues and actions that promote equity.....	3	2	1
4. Collect and analyze staffing pattern data by female/male.....	3	2	1
5. Actively select women to serve in leadership roles, such as departmental chairs, chairs of special committees, participants in leadership training sessions.....	3	2	1
6. Actively select men to serve in supportive/nurturing roles.....	3	2	1
Ensure that equal employment opportunity is practiced in:			
7. development of job descriptions and qualification requirements	3	2	1
8. advertisement.....	3	2	1
9. employment interviews.....	3	2	1
10. wages and benefits.....	3	2	1
11. opportunities for advancement.....	3	2	1
12. Assist staff in providing a bias-free environment for students.....	3	2	1

		Has been done	Planning Stage	Not done
13.	Provide leadership in changing curriculum to ensure that both content and instructional materials are sex fair and help students prepare for expanding roles.....	3	2	1
14.	Design the master class schedule to encourage sex-fair enrollment patterns. For example, avoid scheduling a traditionally female class at the same time as a traditionally male class.....	3	2	1
15.	Monitor class enrollment trends, paying particular attention to any class or program enrolling more than 75 percent of one sex.....	3	2	1
16.	Promote the idea of equity and educational excellence to parents and community members through advisory committees, task forces, newsletters, and other means.....	3	2	1
17.	Ensure compliance with federal and state nondiscrimination requirements	3	2	1
The following activities are being used to promote equity:				
18.	required vocational exploratory courses for all students.....	3	2	1
19.	student orientation sessions that high-light nontraditional occupations and the training needed for these occupations.....	3	2	1
20.	prevocational classes or sessions that orient students to a nontraditional area.....	3	2	1
21.	peer support groups for students enrolled and considering enrolling in nontraditional classes.....	3	2	1
22.	active encouragement and support by counselors for students interested in nontraditional careers.....	3	2	1

23. Please describe the content and duration of any training in gender equity you have had:

24. Check one (please do not omit): ____ male ____ female

Administrative Strategies for Achieving Sex Equity

Administrators can promote equity in several ways. They can

* recognize equity as an important issue and actively plan for it;
* develop and implement sex-equitable policies;
* plan for and support staff development activities related to equity; and
* establish a school climate that promotes excellence in education, including equity for staff members, students, parents and community.

Administrators can us the following strategies to promote sex equity at the college, district and school levels:

1. Identify what has already been done to promote equity.
2. Develop policies, procedures, and guidelines that specifically plan for equity.
3. Establish objectives, activities, and a timeline for activities that increase nontraditional enrollment and staffing patterns.
4. Analyze enrollment and staffing data by sex and by course to identify trends and possible intervention points.
5. Provide inservice programs on equity issues for all staff. These may include topics on current work statistics; family trends; and how to provide for a sex-equitable class-room using appropriate materials, curriculum, language, instruction, and beliefs.
6. Offer bias-free classroom technique suggestions in teacher evaluations, especially in courses where enrollments are predominantly male or female.
7. Use staff meetings and other staff communication channels to build awareness and support for equity.
8. Actively plan to recruit men and women for nontraditional teaching and administrative positions.
9. Promote sex-equity issues with parents and community members through newsletters, school board members, and advisory meetings.
10. Develop a plan to review classroom, library, and guidance materials for evidence of sex bias and to modify them where appropriate. Adopt and use selection criteria for new materials that reflect diversity and equity.
11. Organize curriculum revision projects that redesign program content and activities to make them appropriate for both males and females and to prepare students for expanding and changing roles of men and women.
12. Offer opportunities that encourage student to explore non-traditional options and familiarize them with language and equipment of the area.
13. Design the master class schedule so it encourages

Guidance Counselor Survey

The following survey has ben developed to assist guidance counselors in identifying equity issues and planning for equity in counseling programs. The survey is designed to be used by guidance counselors at the secondary and community college levels. However, elementary guidance counselors may also find the survey helpful as many strategies are appropriate for all levels.

Sex equity is an important developmental guidance issue. It often can be difficult to picture it in action. To understand equity within the framework of guidance and counseling, we can look at career exploration, enrollment patterns, recruitment and retention of students, counseling materials, tests, resources, and the role of counselor as an equity advocate. Following are some equity facts to help you to think about the equity issue.

> *Women work for pay for the same reasons that men work for pay: to meet financial responsibilities, to achieve a sense of contribution to society, and to achieve a sense of personal fulfillment.*
>
> *Opportunities for women to meet financial responsibilities and achieve societal and personal goals have been limited by the fact that women have been concentrated in a relatively few, low-paying occupational fields in the labor force. By expanding career choices and emphasizing the reality of job futures, both females and males will approach life work planning more realistically.*

Guidance Counselor Survey

The following survey items list actions counselors can take to work toward building an equitable school climate. This survey is intended to assess current efforts to provide for equity, to teach counselors what could be done, and to serve as a planning guide for future efforts.

Complete the survey and use its results to determine which areas need to be focused on in building equity into your guidance program.

It has been shown that guidance counselors are key people in building sex-equity programs in schools and colleges. What are you doing to promote sex equity in your school? Listed below are some activities and actions that contribute to sex-equitable guidance programs. For each item, please circle:

3 if it **has been** or is in the process of being done
2 if this is **in the planning stage**
1 if this **has not** been done, but will be considered

	Has been done	**Planning stage**	**Not done**
Section 1: Career Exploration			
1. Encourage students to make academic, career and personal decisions on the basis of individual abilities, informed interests, and need rather than on the basis of their gender....	3	2	1
2. Publicize current information about work force trends to point out the importance of increasing male and female options in career choices.....	3	2	1
3. Provide realistic information about students' probable job futures (for example, most women and men can expect to hold paying jobs even if they marry and have children).....	3	2	1
4. Encourage young women and men to take courses that lead to economic self-sufficiency.....	3	2	1
5. Remind both females and males that mathematics and science are required for jobs of the future and that they should include these courses in their schedules.....	3	2	1

6. Point out that there is a wage inequity by job area (for example, "female jobs" pay lower salaries than typically "male jobs").....	3	2	1
7. Discuss job salaries as they relate to career interest with both female and male students.....	3	2	1
Nontraditional career options are presented to students on a regular basis through:			
8. preregistration sessions.....	3	2	1
9. career fairs.....	3	2	1
10. guest speakers.....	3	2	1
11. career education materials and activities.....	3	2	1

Section 2: Enrollment

12. Statistics are collected and analyzed by course and program to determine patterns in male/female enrollments on a regular basis. (More than 75 percent enrollment of one sex is considered an area of concern).....	3	2	1

Section 3: Recruitment and Retention of Students

13. There is a plan in operation that encourages students to enroll in nontraditional classes.....	3	2	1
14. The school is initiating new and earlier opportunities for the students to explore nontraditional options at elementary and middle/junior high levels.....	3	2	1
15. Nontraditional role models- both men and women- are used as speakers for career days, shadowing, mentoring, and classroom instruction.....	3	2	1
16. Students enrolled or who plan to enroll in nontraditional classes are supported through support groups and contacts with role models and counselors.....	3	2	1

	Has been done	Planning Stage	Not done
Section 4: Materials			
17. Counseling materials, including tests and inventories, are reviewed; those that may reinforce bias and stereotyping are modified or eliminated.....	3	2	1
18. Career counseling materials are current, reflecting new and emerging and nontraditional occupations.....	3	2	1
19. Find and use materials that show the changing roles of men and women in our society, both in the family and in the workplace.....	3	2	1
20. Coordinate bulletin boards and displays that portray women and men working at a variety of jobs, including non-traditional jobs.....	3	2	1
Section 5: Equity Advocate			
21. Assist in planning staff development activities on equity issues.....	3	2	1
22. Developmental guidance is being implemented in this institution.....	3	2	1
23. Please describe the content and duration of any training in gender equity that you have had.			

24. Check one (please do not omit): _____ male ____ female

Guidance Counselor Strategies for Achieving Sex Equity

Guidance counselors can promote equity in several ways. They can

* recognize equity as an important issue and actively plan for it.
* incorporate equity concepts and actions into the K-12 and community college guidance programs.
* provide teachers with support materials that promote equitable career planning.
* ensure that they are meeting the requirements of Title IX and state laws outlining equity for counseling

Guidance counselors can use the following strategies to promote gender equity:

1. Identify current strategies within the guidance program that promote equity and build on those activities.

2. When students are selecting courses and programs in which to enroll, encourage them to consider their options realistically. Remind them that

   * most men and women will hold paying jobs for most of their lives;
   * most men and women work out of economic need;
   * traditionally female jobs pay less than traditionally male jobs.
   * even though greater choices are available, many students-especially girls-don't enroll in courses such as mathematics and science, which limit their choices in future coursework and employment.

3. Use career information that expands career choices:
   * materials that promote sex fairness;
   * bias-free language;
   * posters, graphics, and other materials that expand career ideas; and
   * female and minority role models included as speakers on career days.

4. Reprogram computer career information materials, as necessary, to prompt students to explore nontraditional or higher wage and higher benefit occupations.

5. Review interest inventories and other assessment instruments and the interpretation od results for gender Discontinue use of those found to contain bias.

Teaching Staff Survey

This survey has been developed to help teachers assess and plan for a sex-equitable classroom. It is designed to be used by vocational as well as nonvocational teachers.

Sex equity is an important classroom issue. It is often difficult to picture it in action. However, we can look at equity as it relates to the physical environment, curriculum, language, behavior management and teacher attention. In this survey, we begin to look at what educational equity look like in the classroom. Listed below are a few facts about equity to help you as you think about the issue.

> *Women work for pay for the same reasons that men work for pay: to meet financial responsibilities, to achieve a sense of contribution to society, and to achieve a sense of personal fulfillment.*
>
> *Opportunities for women to meet financial responsibilities and achieve societal and personal goals have been limited by the fact that women have been concentrated in a relatively few, low-paying occupational fields in the labor force. By expanding career choices and emphasizing the reality of job futures, both females and males will approach life work planning more realistically.*
>
> *The average level of education for both men and women workers in the United States is 12.7 years. Yet women working full-time are often paid an average of 70 cents for every dollar paid to men.*

Teacher Survey

The following survey items include actions teachers can take to work toward building and equitable classroom climate. This survey is intended to assess current efforts to provide for equity, to teach instructional staff members what can be done, and to serve as a planning guide for future efforts.

Directions: Listed below are steps teachers can take to achieve gender equity the classroom. As you respond to statements, think about your own classroom situation. For each item, please circle:

3 if it **has been** or is in the process of being done
2 if this is **in the planning stage**
1 if this **has not** ben done, but will be considered

	Has been done	**Planning stage**	**Not done**
Section 1: Curriculum and Materials			
1. Review curriculum, content, activities and projects for appropriateness to both females and males on a regular basis...	3	2	1
2. Eliminate or modify materials or activities that may reinforce bias and stereotyping.....	3	2	1
3. Collect and analyze enrollment statistics by course and program to determine female/male enrollment patterns.....	3	2	1
4. Infuse ideas about careers in lesson plans. Incorporate current information on changing trends in the work force. Discuss the importance of expanding female and male choices in careers.....	3	2	1
5. Reinforce realistic job futures (for example, most women and men can expect to hold paying jobs even if they marry and have families).....	3	2	1
6. Use materials that show the changing roles of men and women, both in the work-place and in the family.....	3	2	1
7. Plan student activities that help female and male students work together more effectively.....	3	2	1

		Has been done	Planning stage	Not done
8.	Design course information materials such as brochures, course descriptions, and handouts to encourage both females and males to enroll.....	3	2	1
Section 2: Classroom Learning Environment				
9.	Evaluate teaching behaviors that encourage equity (for example, nonsexist language, discipline, and reinforcement as well as equal attention to females and males).....	3	2	1
10.	Portray females and males in both traditional and nontraditional roles during discussions and visually in materials and displays such as bulletin boards.....	3	2	1
11.	Incorporate the topics of sex discrimination, stereotyping, and bias into regular course content and discussions when possible.....	3	2	1
12.	Help arrange for nontraditional role models-both men and women-to be speakers for career days, shadowing, mentoring, and classroom instruction..	3	2	1
13.	Involve students in identifying examples of sex discrimination, stereotyping, and bias in textbooks, curriculum materials and media.....	3	2	1
14.	Assist both genders in recognizing that it is very likely their adult roles will include paid work, parenting and homemaking.....	3	2	1
15.	Model sex-fair behavior in actions and words conveying to others the importance of equality.....	3	2	1
16.	Check one (please do not omit): ___ male ___ female			

17. Please describe the content and duration of any training in sex equity you have had.

18. Which of the following describes the area you teach?

___ General (elementary, mathematics, English, physical education music and others)

___ Vocational (agriculture education, business education, technology education, or other)

___ Other (special/alternative programs)
Specify:_____

Teacher Strategies for Achieving Sex Equity

1. Recognize the key role you play in creating an equitable classroom.
2. Plan your classroom to portray sex fairness. Use posters and other visuals that show both males and females in traditional and nontraditional roles that show males and females working together.
3. Check learning activities for sex fairness. Also plan lessons that focus on increasing students' equity awareness, knowledge and skills.
4. Use inclusionary language in both written and verbal communication. Encourage students to do the same.
5. Direct class discussion to enable all students to participate. Studies have shown that teachers give more attention to male students, calling on them more frequently, asking them higher-order questions, offering them more assistance, and disciplining them more often.
6. Promote cooperation and integration of males and females through activities that help student work together more effectively.
7. Help students understand equity issues and the impact these issues have on their lives
8. Avoid generalizations and sex stereotypes, such as " you drive like a woman" or "you think like a man."
9. Encourage both women and men to participate in traditional and nontraditional activities.
11. Examine instructional materials for sex-role stereotyping, sex bias and sexist language. Discuss and point these out to students.
12. Make a conscious effort to assign females and males leadership roles on an equitable basis, both within and outside the classroom.

State of Florida
Department of Education
Tallahassee, Florida
Frank T. Brogan, Commissioner

GE 349

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